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Census of India, 1931

VOL. I—INDIA

Part I—Report

by

J. H. HUTTON, C.I.E., D.Sc., F.A.S.B.,
Corresponding Member of the Anthropologische Gesellschaft of Vienna

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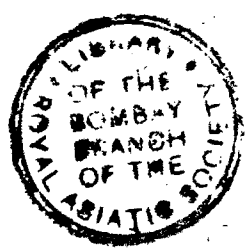

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Simla, the 4th June 1933.

To

The Hon'ble Sir HARRY HAIG, K.C.S.I., C.I.E., I.C.S.,
Member of the Governor-General's Executive Council,
Simla.

Sir,

I have the honour to submit herewith a report on the census of India taken in February 1931. The reports and tables prepared for individual Provinces and States have already been published, since the necessary material is available in detail provincially before it can be compiled for the whole of India. These provincial and state volumes will be found to deal in particular with points which I have been able only to treat in general, and the method I have followed for the most part has been to examine for myself the figures for India as a whole and then to turn to the provincial reports to point a moral or adorn the tale, but the conclusions formed and the opinions expressed are my own.

This India volume consists of five parts, (i) my report (together with that of the actuary, Mr. L. S. Vaidyanathan), (ii) the statistical tables for India, (iii) a collection of papers of ethnographical interest, (iv) the social and linguistic maps for India and the Provinces bound separately and (v) an administrative report, the two latter volumes being intended primarily for departmental use. In submitting it, it is my fortunate duty to bring formally to your notice the able series of the 1931 Census Reports already mentioned, which are numbered indeed after this volume but have appeared before it. I have therefore the honour to recommend with confidence to your perusal not this report but the other twenty-seven, and to be

Sir,

Your most obedient servant,

J. H. HUTTON,
Census Commissioner for India.

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INTRODUCTION.

At the very outset of this Report I find it incumbent on me to depart from precedent and to begin with acknowledgments, first of all, as is fit, to the people of India themselves whose good sense, good citizenship and general co-operation made the taking of the census possible, but most of all perhaps to that great body of some two million unpaid enumerators by whom the census was actually taken and without whom it could not have been taken, many of whom were out of pocket by the taking and many of whom carried out their work under circumstances of opposition, interference and general unpopularity. The greatest credit is due to them, and that, and a *sanad* of printed paper, is the only reward that most of them have had. The taking of the pecennial census in India involves the co-operation of more than one-sixth of the world's population over an area of nearly two million square miles in a combined response to organised enquiry, and the expense would be prohibitive if all the services rendered were paid. Moreover enumerators' duties were often as onerous physically as they frequently were morally. While city enumerators had generally to take larger blocks than usual since enumerators were harder to come by, those in rural areas often had to cover long distances; in Baluchistan the average enumerator had a block of 836 square miles (in the tribal areas 1,460) in which to find his fifty houses, as a 'village' was often a moving encampment of two or three tents with an average area of 36 square miles to itself.

Acknowledgments are due likewise to the other links in the chain of organisation. Supervisors, Charge Superintendents, District Census Officers, District Magistrates are all part of the necessary machinery and no whit less essential than the enumerator, and in their case the census came as an extra—a piece of gratuitous and troublesome overtime work added to their usual duties in many places already onerous and trying above the ordinary by reason of political agitation. For this census like that of 1921 had the misfortune to coincide with a wave of non-co-operation, and the march of Mr. Gandhi and his *contrabandistas* to invest the salt-pans of Dharasana synchronized with the opening of census operations. The blessing which he gave to the census at the last minute in 1921 was this time wanting, and, though he himself is not known to have issued any advice to boycott the census, it seemed good to some other Congress leaders to do so, as, although they do not seem to have regarded a census as objectionable in itself, the opportunity for harassing government seemed too good to be missed, and January 11th, 1931, was notified by the Congress Committee to be observed as Census Boycott Sunday. This boycott was not, however, taken up with any real enthusiasm and, except in the Gujarat cities of Ahmadabad, Broach and Surat and some smaller municipalities like Ghatkopar and Villaparle, had very little ultimate effect on the taking of the census; but the petty annoyances, resignations and interferences with the preparations for final enumeration very greatly increased the work, the responsibilities and the anxieties of local officers in charge of census work, including as they did not only revenue officers of all grades and village schoolmasters but police, magistrates, paid and honorary, railway officials, forest officers, port officers, ministerial officers in government offices, municipal officers and many others. On the other hand no less trouble was caused in some places by an excess of the zeal on the part of all parties to register as many adherents as possible in view of the possibility of a communal franchise based on the census returns. This was particularly the case in the Punjab, where the exterior castes, badgered first by one party then by another to return themselves as Sikhs, Hindus or Muslims as the case might be, labelled themselves *Ad Dharmi*, or adherents of the original religion, and so added to the number of religions returned in the census schedules. So high did feeling run over the return of religion in the Punjab that disputes as to whether a man was Ad Dharmi or Sikh led to a number of affrays and at least to one homicide. Politics were also troublesome in the borders of Orissa where a pan-Oriya propaganda, carried on to an extent calculated to frustrate its own purposes, engendered a corresponding counter-propaganda, all detrimental to census taking. Special measures were needed in Madras and much additional work caused to the Superintendent of that province and in a less degree also to the Superintendents of

Bengal, Bihar and Orissa and the Central Provinces. Other provinces experienced the usual difficulties that attend census taking in India. In one the Bhils for instance would not have their houses numbered on superstitious grounds, while in Burma householders objected on artistic grounds. In the Shan States the thirteenth and last survivor of a pre-annexation raid happened to occupy the thirteenth house in a block. As the enumerator inconsiderately refused to rearrange the numbers, he decided that his was up indeed, went forth into the jungle and committed harakiri. In less law-abiding places the disposition was rather towards disembowelling the enumerator than the enumerated, while the effacing of census numbers was a minor difficulty that was particularly troublesome in 1931. Here and there wild beasts interfered instead of wild men, and the Administrator of Bastar State, when inspecting census work on the night itself, was attacked by a tiger, which sprang on to the bonnet of his car, but finding the pace and the radiator too hot for him failed to make an end either of the inspector or his inspection.

Difficulties notwithstanding, the census was taken at the appointed time and a complete return was received from all places except Ahmadabad in Gujarat. The returns for some other towns in Gujarat, *e.g.*, Broach and Surat, were probably defective, but, as received from the municipalities concerned, were ostensibly correct. In the case of Ahmadabad the census was not completed and the number actually enumerated was estimated to be some seventy-five to seventy-six thousand short of the real total; according to the census since taken by the Ahmadabad Municipality itself the deficiency was nearly the double of my estimate. In Burma a rebellion broke out between the preliminary and the final enumeration. It interfered with the latter in at least one district but with the former hardly at all. In the Census Abstract published for Parliament I based my estimates of the error caused in the census enumeration by Congress activities on the very carefully estimated error worked out by the Census Superintendent of Bombay for that province which came to ·04 per cent.; this I doubled for the whole of India arriving at a maximum deficiency of ·085 per cent. in the Indian figures. If the Ahmadabad Municipality return be accepted and the deficiency be re-calculated accordingly the error still works out at only ·1 per cent. for the total population of India. This of course refers to any deficiency caused by the clash of politics with the census. Other inaccuracies, whatever the amount, are likely to be fairly constant from census to census; the error in the numerical count has been put at a maximum of one per mille and is probably less. The Census Commissioner in 1921 estimated the percentage of error in recording sex and religion at about one per cent.; I doubt myself if it is nearly as high as this, but otherwise his estimates probably hold good of this census also. Owing to the Sarda Act however there has been a definite decrease of accuracy in the record of civil condition, and I estimate the error in this respect to be not less than ·5 per cent. and probably higher. Fortunately it seems possible to allocate with safety at least the greater part of this error to deliberately inaccurate returns of 'unmarried' instead of 'married' for girls married during 1931 in contravention of the age-limits imposed by the Marriage Restraint Act. Error in classification after the return has been made is quite a different thing from error in record and it is extremely difficult to form any estimate of its extent. The entries in the schedules are copied on to slips, omitting the block, circle and charge numbers and of course the personal names, and are then sorted into sets of labelled pigeon-holes and counted for the figures which constitute the tables. Different colours are used for different religions and each slip is stamped or printed with a symbol to denote sex. These symbols in 1931 were amplified by hand to signify civil condition. It was found quicker to add to the symbol than to have previously marked symbols from which the correct one had to be selected, a course which involved a choice of six according to sex and civil condition for each individual slip. Probably also the practice of altering by hand involves less error than that of selection when the tendency will be for the copyist, who must turn out a minimum number of slips and is paid in part at any rate by outturn, to fill up the wrong slip rather than to waste time by changing it when wrongly selected. In any case there is room for error in slip copying and for error again in sorting, though careful supervision at both stages may keep it down to a very small margin. A certain difficulty and anomaly was also introduced into tabulation by the fact that the Burma figures were tabulated on a different system from that followed in India proper. The method of tabulating by religion has never been found very suitable in Burma and on this occasion was abandoned for tabulation by race in the interests

of that province, but at the cost of some inconsistencies in the presentation of the India figures.

This digression on error has led me aside before making my acknowledgments to the census officers of provinces and states, of whom a list will be found in Chapter I. It seemed to me that their work as a whole was admirable. Several had special difficulties Captain Mallam in the North-West Frontier Province, Mr. Turner in the United Provinces, Mr. Porter in Bengal and Mr. Shoobert in the Central Provinces all experienced difficulties in organising their enumeration on account of political agitation; and Khan Sahib Ahmad Hasan Khan in the Punjab had his trouble when the actual enumeration took place; even in Delhi his enumerators found their house numbers obliterated and their movements obstructed. Mr. Dracup in Bombay had to contend with the most difficult and troublesome situations of all on account of the anti-census campaign in Gujarat. Bombay has a bad reputation for breaking the health of her Census Superintendents. The first Superintendent in 1911 broke down after the enumeration was over and the early death of the 1921 Superintendent must be imputed at any rate in part to the strain of that census. Mr. Dracup managed to carry on till the compilation was almost finished and his reports begun (for the Bombay post involved writing two additional reports, one for the Western India States Agency, the other for the Bombay Cities), but his health could not stand it; he suffered the chagrin of being beaten on the post, and had to make over his material to Mr. Sorley. More provinces than usual were handicapped by similar changes. In Bihar and Orissa Mr. Scotland's health broke down very early in the operations and his work was taken over by Mr. Lacey who had a very uphill task indeed to get his census to synchronize, as he came in at a critical stage which found him unfamiliar with the early part of the work and at which the preparations for enumeration had fallen sadly into arrears as the inevitable result of Mr. Scotland's ill-health. In the North-West Frontier Province Captain Mallam lasted like Mr. Dracup till his report was part written; at the earlier stages he was more than once taken away from his census work for administrative ends and but for these diversions would probably have finished single-handed; as it was, Mr. Dundas had like Mr. Sorley the difficult task of writing a report on a census of which he had seen nothing but the materials collected in the course of operations in which he had taken no part at all. Mr. Shoobert in the Central Provinces and Berar was likewise hampered by being abstracted from his census work for administrative necessities for an inconveniently long period at an early stage of the operations and was delayed by illness towards their close. Rai Bahadur Anant Ram in Kashmir had the disadvantage of not having been in charge of the census from the start of operations and Khan Bahadur Gul Muhammad Khan in Baluchistan was taken away before he had finished to be Wazir-i-Azam of Kalat State and had to write his report while performing the onerous duties of his vizierate. Colonel Cole with Rajputana and Ajmer-Merwara, Mr. Porter with Bengal and the City of Calcutta and Khan Sahib Ahmad Hasan Khan with the Punjab and Delhi all had two Reports to write instead of one.

Special difficulties were experienced in Madras and in a lesser degree in Assam and also in Bihar and Orissa and more or less in all provinces as a result of the change in system, which actually took place in 1921 but the full effects of which were not experienced until this census, by which all costs were made debitable to the Central Governments. The local expenses of enumeration, including the travelling allowances of all local officers doing census work in addition to their ordinary duties, and including stationery, stamps and so forth required in mofussil operations, had all been charged hitherto to the expenses of general administration, much the most convenient and economical way of dealing with small items extremely difficult to disentangle from others where no separate organisation existed; and owing to their being merged in general administration no separate record of the expenditure was extant. In 1931 the operations were carried out precisely as before and the methods used by local officers at previous censuses were used again. It was not till afterwards that it was discovered that serious liabilities had been incurred in the matter of travelling allowances to meet which no provision had been made in budgetting. District Officers had little enough time to spare for the census in any case, and the general tendency was in many cases to take the position that this was a central charge, let the central authorities see to it. Moreover, many of the claims were submitted at a date

which though admissible for ordinary audit purposes was so long after the journeys had taken place that any check of the claim was made extremely difficult. Mr. Yeatts in Madras received no fewer than 26,000 unanticipated bills for travelling allowances amounting in all to approximately Rs. 3,00,000, many of them claims received during 1932 for journeys undertaken in 1931. Many of these bills contained claims relating to a whole charge or even taluk, and the actual number of personal claims involved was greatly in excess, of course, of the mere total of bills. By subjecting each bill to the strictest personal scrutiny in the light of the actual expenses probably incurred Mr. Yeatts was able to reduce the total actually paid to Rs. 1,30,000, but it was only by ruthlessly cutting down the claims to the amount by which claimants were likely to have been actually out of pocket, a course of action only made possible by the fact that Mr. Yeatts himself had never drawn more than his actual out of pocket expenses when touring, whatever the rules allowed him to draw above that. Both he and Mr. Mullan in Assam must have incurred no little odium in the course of their pruning of travelling allowance bills for the extent and nature of which they were in no way to blame, as they had not even been in a position to prepare their own budgets, since the provincial budgets for the year of enumeration were all prepared by local governments before superintendents took over charge, and there was in any case no separate record of the very considerable sums spent in this way from provincial revenues in 1921.

It was another of the misfortunes of the 1931 census that it coincided with a fall in revenue and a period of economic depression which made the most rigorous economy necessary and which left me no choice but to cut all expenditure as fine as possible and to goad my Census Superintendents unremittingly in an attempt to finish sooner and spend less. Their responses were loyal and whole hearted, and in almost every province the actual cost of the census per head censused has been appreciably reduced, if those items be excluded which never appeared in the accounts of 1921. These items not only included the travelling allowance of local officers, previously debited to general administration and the provincial revenues, as well as stamps, stationery and other items used in district offices and similarly debited, but also included all pay of officers whether Provincial or Imperial who were deputed to the Census Department, as well as their leave pay earned during their census service, passage contributions and so forth. In some cases the budget of this census has even been debited with the leave pay of officers who served the department in 1921 or earlier but not in 1931 at all. Wages had all increased since 1921 and the cost of printing to the census has been enormously enhanced, in some cases by two hundred per cent. or more, as the result of a change in the method of costing. Under the old method the overhead charges were not debited at all to the census when the printing was done, as most of it is, in Government presses. It will be seen at once therefore that a very large part of the increase in the gross cost of the census, approximately Rs. 48,76,000 in 1931 against Rs. 40,00,000 in 1921, is an increase on paper only. As nearly as can be reckoned the actual net expenditure incurred for the 1931 census which is comparable with the expenditure on that of 1921, excluding items not then charged to the census budget, amounts to Rs. 40,13,000, and when this is reduced to the cost per thousand of persons censused, which is the only fair standard of comparison, the 1931 census comes quite creditably through the test having cost only Rs. 12·8 per thousand persons censused as compared to Rs. 14 per thousand in 1921. The cost of the census of England and Wales in 1921 was £9-5-6 per thousand (about Rs. 124 of Indian money) " exclusive of the expenditure on printing, stationery, maps, etc.", the exclusion of which from the costs of the Indian census would reduce the cost per thousand to Rs. 13·3, while the census of Northern Ireland in 1926 cost over £15-6-4 per thousand inclusive of printing, etc., that is Rs. 202 per thousand as compared to India's Rs. 14 inclusive. The census of India therefore is not only by far the most extensive census operation in the world but, besides being one of the quickest, it is probably the cheapest. Even so the cost is no inconsiderable item at a time when the difficulty of restricting expenditure to the limits imposed by dwindling revenue is so difficult that many countries decided to dispense entirely with the census due in 1931 ; and it was therefore necessary to exercise a very parsimonious economy, and I owe to all Census Superintendents and likewise to their administrative, office and compiling staff not only my acknowledgments for their ungrudging co-operation but also my apologies for driving them at a pace

which has admitted of closing down the department some seven months earlier than usual, and for cutting down their estimates to the finest possible margin compatible with reasonable efficiency. The work of a provincial census officer in India, all done against time, against expenditure, and without holidays, is far from the pleasant occupation which its interest would make it were the need for speed and economy less exacting.

In spite of this there has been no falling off in the quality of the reports which well maintain the high standard set by past series. The Andamans and Nicobars Report reflects Mr. Bonington's lifelong acquaintance with the forests of those islands and their shy, little-known inhabitants; Colonel Cole brought to the Rajputana volume a knowledge of the Rajputs and their clans acquired not only regimentally but in the course of several years as Recruiting Officer for Rajput battalions; he also showed a commendable despatch and but for his press would have finished even earlier than he did. The other authors of British India Reports are all executive officers in the Imperial or Provincial services and the outlook of the settlement officer is conspicuous among them throughout the series, from Mr. Mullan's lively volume on Assam (also one of the first to be published) to Mr. Turner's exceptionally full and detailed report on the United Provinces. Their several qualities may frequently be inferred from the excerpts given freely in this volume, and where all have reached a high standard it would seem invidious to discriminate. The reports of Messrs. Bonington, Shoobert and Lacey all contain interesting ethnographical material; Mr. Yeatts' particularly well written volume is noticeable for his treatment of infirmities, and Mr. Porter's for a new attack upon the population problem and for an interesting account of the processes of certain decaying rural industries. In Burma and in Bombay Messrs. Bennison and Sorley have brought to the census the experience gained in the study of social and economic questions, and Khan Sahib Ahmad Hasan Khan has opened the volume on Delhi, new to the series, with a conspectus of the capital's historic past. Among the States and Agencies the Rajputana volume has already been mentioned, as also Messrs. Dracup and Sorley's on the Western India States, another new addition to the series, while Mr. Venkatachar has filled in somewhat of a hiatus in the census accounts of the peninsula with his exceptionally interesting report on Central India.

The States that contribute separate volumes pay independently for their own operations and the total cost of their census. Owing to this fact I was fortunate enough to be spared the unpleasant task of reducing budgets, but the exigencies of the India work compelled me in some cases to keep hurrying their Census Commissioners during the compilation stage, and my acknowledgments are due to the latter no less than to the Census Superintendents in British India for their efforts to comply with an impatience which they may well have regarded as untimely, and which must certainly have been inconvenient at any rate to Rai Bahadur Anant Ram in Kashmir, who had to finish off his census at a time of political and economic disturbance with a depleted and inadequate staff. Of the other states' Census Commissioners Mr. Ghulam Ahmed Khan in Hyderabad and Mr. Rang Lal in Gwalior have approached their subject from the administrative points of view like most of the Census Superintendents in British India, Mr. Khan incidentally adding to our knowledge of the Chenchus, while Mr. Venkatesa Iyengar in Mysore has given another detailed account of processes of declining industries. Mr. Sankara Menon in Cochin has written a thoughtful report as an educationist, a calling unrepresented in the British series. In Travancore Dr. Pillai has to his credit an admirably produced report embodying not only a brief economic survey of the state but a good deal of fresh information as to the vanishing tribes and disappearing industries of a state which is so advanced that he was able to make a useful experiment in compilation by the employment, as in Cochin, of women as sorters and slip-copyists, and very efficient they proved. The outstanding report among the states is again that of Mr. Mukerjea on Baroda who is to be congratulated not only on his admirable presentation of material but on the extreme rapidity with which he produced so comprehensive a volume. His previous experience in 1921 has been put to the best account and I have myself taken advantage of it, particularly in the arrangement of fertility figures. He is also responsible for an innovation in enumeration by *billets individuels* which may very well bear much fruit at the next census of India.

To Mr. Trousdell and Mr. Golder of the Government of India Press in Simla I owe both acknowledgments for their patience and despatch, and apologies for

the inconvenience caused by repeated calls for fresh proofs of altered tables, while I have to thank Mr. Carter of the Government of India Press in Delhi as well as Mr. Golder for much very useful advice and assistance. To Colonel A. J. H. Russell, then Public Health Commissioner, I owe the diagrams of vital statistics and information on several points in Chapter VII. To several others, to more indeed than I can mention here, I owe acknowledgments of some kind for advice, information or criticism. Mr. L. S. Vaidyanathan of the Oriental Government Security Life Assurance Company, Bombay, who has contributed the most comprehensive actuarial examination of the Indian age returns yet attempted and the life tables based on them, Dr. B. S. Guha of the Anthropological Branch of the Zoological Survey of India, who carried out for this census a detailed anthropometrical survey of certain castes and tribes and who has contributed his valuable analysis of their physical characteristics to the volume of ethnographical appendices, Colonel R. B. Seymour Sewell, Director of the same Department, Rai Bahadur Ramaprasad Chanda and Mr. E. J. H. Mackay, both of the Archæological Survey, have all helped me with information and friendly criticism and to Dr. Guha again I owe the drawings of the Bayana, Sialkot and Nal crania that appear in Chapter XII. Mr. Yeatts has added to my obligation to him by his assistance in proof reading.

My final but far from least weighty acknowledgments are due first to my own office, to whose ungrudging co-operation is due the early completion of the report, particularly to the Superintendent Mr. A. R. Chitnis, to whose statistical experience and careful scrutiny of figures must be attributed whatever degree of accuracy their presentation here can claim, to the head compiler, Mr. F. E. Wright and his second Mr. Mulherkar, who are primarily responsible for the compilation of Part II; and then to my predecessors, to Sir Edward Gait in particular, whose work in previous decades has done so much to simplify mine in this. The conception of the social maps was due to a scheme for a population map of India evolved by Colonel Tandy in 1921 and here modified and adapted to suit small scale maps and a high density of population; the idea of the linguistic maps and the record of bilingualism first occurred to me in the course of correspondence with Colonel T. C. Hodson, now Wyse Professor of Anthropology in Cambridge. The German anthropologist, Baron von Eickstedt, suggested a series of maps which would show the population of each village by caste and religion in coloured points of varying shape and size. The system is an admirable one which would if applied to India give a most valuable and interesting record, but the cost of producing series of maps on the large scale necessary to show every village with its inhabitants by castes or tribes was in itself obviously prohibitive, apart from the time and labour involved in compiling the statistics of caste by villages.

A word of apology is due on the contents of this report. The opportunities of a census of India come if at all but once to most of us, and I am only too conscious of opportunity neglected, for I have left undone that which I ought to have done and I have done much less than I should like to have done. *Res angusta civitatis* is my defence; I should be the first to admit it inadequate, but the imperative necessity for a rigid economy made any departure from and still more any enlargement of the known and familiar paths dangerous as well as extremely difficult. As it was, some of the material actually collected in the enumeration schedules had to be left uncopied and unsorted as a measure of retrenchment, and the industrial statistics of 1921 were not attempted; a tally of horsepower, handlooms and mechanical shuttles is hardly a legitimate part of a population census in any case, and the statistics can be just as well collected at another time by the Department of Industries and Labour by means of the circulation of forms unsynchronised with the census schedules. An attempt to collect a return of the educated unemployed on separate schedules was a fiasco, as though large numbers of the schedules were issued very few were received back; the reasons given are various but apathy was probably the prevailing one. Such as they are, both the reasons for the failure and the figures obtained will be found recorded in Chapter IX. The returns of age are probably more accurate than ever before, thanks to the method of treating the figures advocated by Mr. H. G. W. Meikle, as a result of his actuarial examination of the 1921 returns, and adopted for the first time in 1931. On the other hand the figures of urban population in Gujarat and of civil condition must be admitted to be below the previous standard of accuracy, a degeneration due in the one case to Congress activities and in the other primarily to the indirect influence of the Sarda Act, but also perhaps in some degree to the very same change in the method of sorting and

compiling which has so much improved the return of age unqualified by other factors. In any case the treatment of sociological features of the population of India is much prejudiced by the absence of any general or compulsory registration of births, deaths or marriages; an absence which would go far to nullify social legislation such as that implied in the Sarda Act itself, and to which attention was drawn by the Age of Consent Committee. The difficulties of introducing compulsory registration are no doubt great, but it is not easy to see how social legislation can be really effective without it. Nevertheless some attempt has been made at this census to collect figures for the fertility of females of different social standing and of various occupations in the hope of throwing some much needed light on the rate of reproduction in India. These are censorious days and there were not wanting articles in newspapers of the baser sort to suggest that the figures of fertility were being collected with a view to defaming the people of India. It is possible therefore that critics may be found who will conceive that they detect in Chapters III to VI, or elsewhere in this report, the cloven slots of a considered cloacinity. It is of course impossible to discuss the growth of population without any reference to its health. Those determined to see ill motives will be deterred by no denials, but to those who are not I would offer an assurance (which I hope is not needed) that nothing has been set down in malice. In the first five chapters, except for a page or two on the population problem, I have allowed myself to depart as little as possible from the statistics to be examined (no haunts for Apollo here); in Chapter VI the social movements and legislation of the decade have called for a short digression before returning to the figures in Chapters VII, VIII and IX. In the last three Chapters I have frankly permitted myself, after examining the relative figures, to venture aside to a more speculative treatment of race and religion. What was for long the orthodox view of the history of race and culture in India was brilliantly propounded by Sir Herbert Risley in the Census Report of 1901; the work that has been done since makes it probable that there has been a far greater degree of continuity in the pre-history of India than was then supposed, and certain that India was not characterised, as Sir Herbert believed, by racial or cultural isolation. Much work has to be done before any views on these subjects can claim finality, but certain hypotheses may fairly be advanced on the material accumulated since that census. With the exceptions mentioned I have stayed by my statistics, a valley of dry bones it may be, very far from Helicon, and I no Ezekiel to clothe them with flesh, content if I have played the part of Joab to hope that I may at least escape the unhappy recompense meted out to that early numberer of peoples. At any rate I have made no naughty omission of Levi and Benjamin on purpose, and if some of the tale have gone untold they must be few indeed when the increase alone since 1921 numbers nearly thirty four millions. For the Father of History is proved right again. Ἰνδῶν δε πλῆθος, he said near twenty-four hundred years ago, πλεῖστόν ἐστι πάντων τῶν ἡμεῖς ἴδμεν ἀνθρώπων and this census has justified him indeed, for it can be once more stated with some confidence that 'of all the nations that we know it is India has the largest population'.

Simla,

June 4th, 1933.

J. H. HUTTON.

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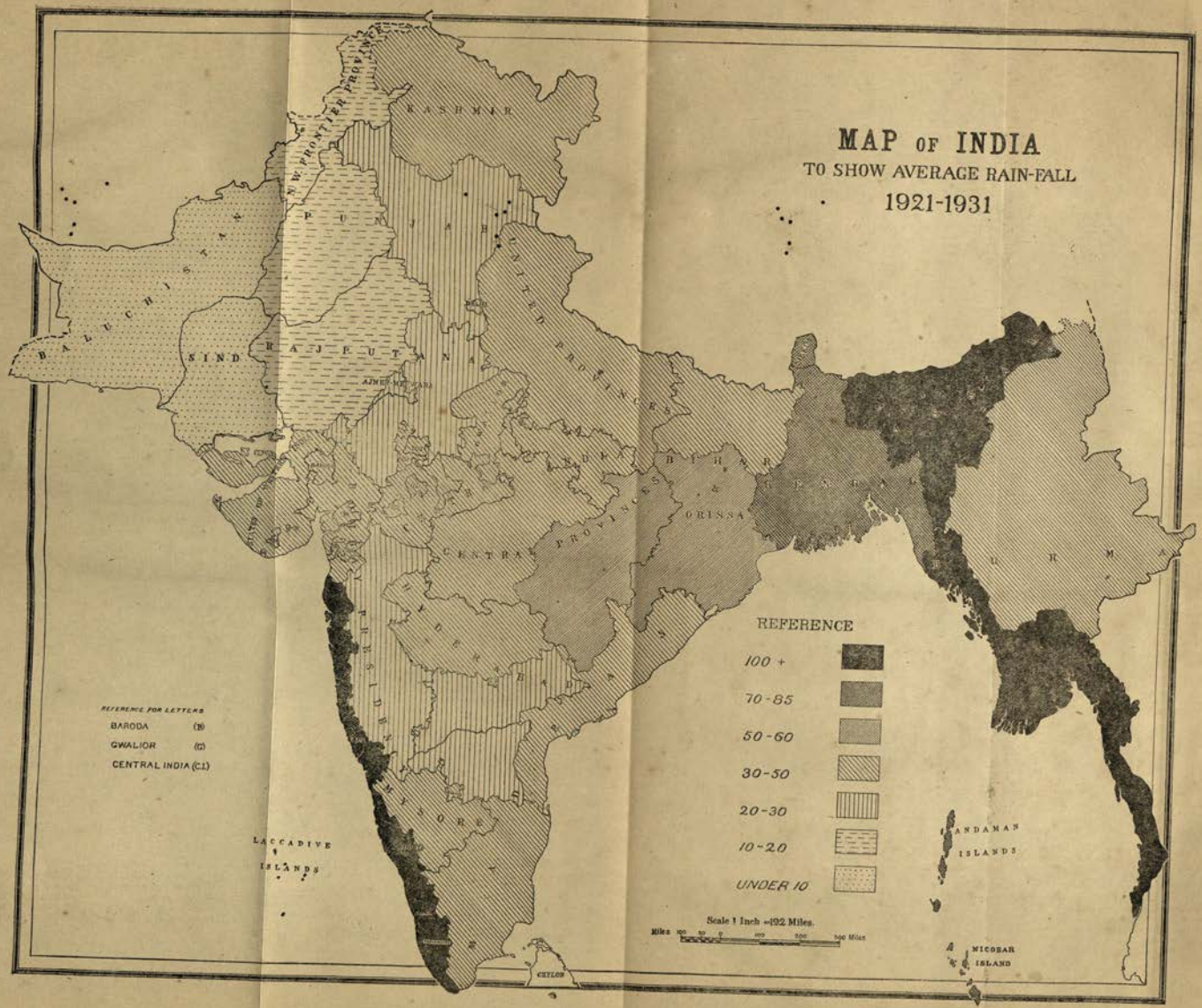
INDIA, CENSUS OF 1931

REG. No 112 X O.D. 1933-2,500

Published under the direction of Brigadier R. H. Thomas, D.S.O., Surveyor General of India.
1933

Scale 12,000,000 or 1·014 Inches to 192 Miles

Heliocincographed at the Survey of India Offices, Dehra Dun.


MAP OF INDIA
TO SHOW AVERAGE RAIN-FALL
1921-1931
KASHMIR
N.W. FRONTIER PROVINCE
PUNJAB
BALUCHISTAN
SIND
RAJPUTANA
AJMER-MEWARA
UNITED PROVINCES
BIHAR & ORISSA
CENTRAL PROVINCES
HYDERABAD
MYSORE
BURMA
REFERENCE
100 +
70-85
50-60
30-50
20-30
10-20
UNDER 10
REFERENCE FOR LETTERS
BARODA (B)
GWALIOR (G)
CENTRAL INDIA (C.I.)
LACCADIVE ISLANDS
ANDAMAN ISLANDS
NICOBAR ISLAND
CEYLON
Scale 1 Inch =192 Miles.
Miles 100 50 0 100 200 300 Miles

REPORT

ON THE

CENSUS OF INDIA, 1931.

CHAPTER I.

Distribution and Movement of Population.

Section i.—Scope of the Report.

Geographical Area.

1. The area covered by the sixth general census of India is approximately identical with that covered by the census of 1921 and differs little from the area of previous occasions from 1881 onwards; 2,308 sq. miles containing some 34,000 inhabitants have been added in Burma and in the north-east of Assam, while on the other hand, six sq. miles have been lost to Nepal. The statistics therefore cover the whole empire of India with Burma (exclusive of Ceylon and the Maldives) as well as Aden and Perim Island, but not the Kuria Muria Islands* and Sokotra, which is part of the Aden Protectorate, administered from Aden on behalf of the Colonial Office, and not part of British India. The statistics and the tables do not of course cover those parts of the peninsula which are not parts of the British Empire, that is to say, Afghanistan, Nepal, Bhutan and the French and Portuguese possessions, the area and population of which, together with the rate of increase since 1921 where available, are shown in the marginal table. For the rest the scope of this census extended to the whole of the peninsula of India, forming what is commonly described as a sub-continent between long. 61° and 101° E. and lat. 6° to 37°N. Some information has also been included with regard to natives of India resident permanently or temporarily outside the Indian Empire or serving on the High Seas at the time the census was taken.

Area covered by the census of India.

Year.	Sq. miles.	Increase.
1881	1,382,624	..
1891	1,560,160	177,536
1901	1,766,597	206,437
1911	1,802,657	36,060
1921	1,805,332	2,675
1931	1,808,679	3,347

and the adjacent islands and islets

Changes in external area since 1921.

—	Sq. miles.	Population.
Assam	+908	+15,711
Burma	+1,400	+18,327
United Provinces ..	—6	—130
Total net addition	+2,302	+33,908

—	Area in sq. miles.	Population 1931.	Percentage of Increase since 1921.
Afghanistan	250,000	7,000,000	..
Bhutan ..	20,000	250,000	..
Nepal ..	54,000	5,600,000	..
French India	196	286,410	+6·24
Portuguese India.	1,461	579,969	+5·79

Obviously within an area of such size, part of which is well within the temperate zone while part is almost equatorial, the diversity of condition both of the population and of its environment must be very great indeed. Geologically, while the peninsula is one of the oldest of the world's formations, the Himalayas are one of the most recent. Not unnaturally therefore there is a great variety of physical feature, varying not only from the loftiest mountains of the world to flats salted by every tide, but from sandy deserts with a rainfall of five inches or less in a year in the north-west to thickly wooded evergreen hills which have never less than 100 inches and here and there get 500 inches of rain or even more in the east and south. Again in northern India there are extremes of temperature—120° of heat dropping to cold below freezing point, while in the south the temperature is almost static

*The population of these islands remains conjectural, and the only information that can be had about them was obtained in 1920 from the Senior Naval Officer at Aden and it is printed in Part III of this Report, since, although out of date, it appears to be the latest information available. The question of the language of Sokotra formerly perhaps written, but now a spoken language only, is of some interest, as are likewise habits and customs of the populations of these islands some of whom in Sokotra are cave dwellers; it is therefore unfortunate from a scientific point of view that no investigation has ever apparently been made.

in its heat and humidity. As might be expected the physical features of the inhabitants are no less variable than those of their environments. Any haphazard collection of Indians will afford types of very different ethnic groups, though the composition would vary according to the locality. The number of languages, as classified by Sir George Grierson in his *Linguistic Survey of India* and exclusive of dialects, is 225 by the returns of 1931. Creeds may be less numerous, but castes, customs and sects must be no less diverse, and the same applies to social, political and economic conditions. Thus the peoples to be covered by this report present every aspect from that of the latest phase of western civilization to that of the most primitive tribes, which, like the Andamanese or like the Kadar or Uralis of southern India, still exist by hunting and collecting forest produce without ever apparently having reached the stage of agriculture at all. Naturally any report of the census of so large and diversified an area must, if it is to be contained in a volume, be of a superficial nature, leaving the closer examination of the figures and facts revealed by enumeration to the reports severally undertaken for each of the Provinces and larger States.

Serial no. of volume.	Parts contained.	Province, etc., treated.	Author.
Vol. I	(*i*). Report; (*ii*). Tables; (*iii*). Appendix vol.	India	J. H. Hutton.
Vol. II	One	Andamans and Nicobars	M. C. C. Bonington.
Vol. III	(*i*). Report; (*ii*). Tables	Assam	C. S. Mullan.
Vol. IV	One	Baluchistan	Gul Muhammad Khan.
Vol. V	(*i*). Report; (*ii*). Tables	Bengal	A. E. Porter.
Vol. VI	One	City of Calcutta	A. E. Porter.
Vol. VII	(*i*). Report; (*ii*). Tables	Bihar and Orissa	W. G. Lacey.
Vol. VIII	(*i*). Report; (*ii*). Tables;	Bombay (*with Aden*)	A. H. Dracup and H. T. Sorley.
	(*iii*). Aden	*Aden*	D. S. Johnston.
Vol. IX	One	Cities of Bombay	H. T. Sorley.
Vol. X	One	Western India States Agency	A. H. Dracup and H. T. Sorley.
Vol. XI	(*i*). Report; (*ii*). Tables;	Burma	J. J. Bennison.
Vol. XII	(*i*). Report; (*ii*). Tables	Central Provinces and Berar	W. H. Shoobert.
Vol. XIII	One	Coorg	M. S. Mandanna.
Vol. XIV	(*i*). Report; (*ii*). Tables	Madras	M. W. M. Yeatts.
Vol. XV	One	North-West Frontier Province.	G. L. Mallam and A. D. F. Dundas.
Vol. XVI	One	Delhi	Ahmad Hasan Khan.
Vol. XVII	(*i*). Report; (*ii*). Tables	Punjab	Ahmad Hasan Khan.
Vol. XVIII	(*i*). Report; (*ii*). Tables	United Provinces of Agra and Oudh.	A. C. Turner.
Vol. XIX	(*i*). Report; (*ii*). Tables	Baroda State	S. V. Mukerjea.
Vol. XX	(*i*). Report; (*ii*). Tables	Central India Agency	C. S. Venkatachar.
Vol. XXI	One	Cochin State	T. K. Sankara Menon.
Vol. XXII	(*i*). Report; (*ii*). Tables	Gwalior State	Rang Lal.
Vol. XXIII	(*i*). Report; (*ii*). Tables	Hyderabad State	Ghulam Ahmad Khan.
Vol. XXIV	(*i*). Report; (*ii*). Tables	Jammu and Kashmir State	Anant Ram.
Vol. XXV	(*i*). Report; (*ii*). Tables	Mysore State	M. Venkatesa Iyengar.
Vol. XXVI	One	Ajmer-Merwara	B. L. Cole.
Vol. XXVII	One	Rajputana Agency	B. L. Cole.
Vol. XXVIII	(*i*). Report; (*ii*). Tables	Travancore State	N. Kunjan Pillai.

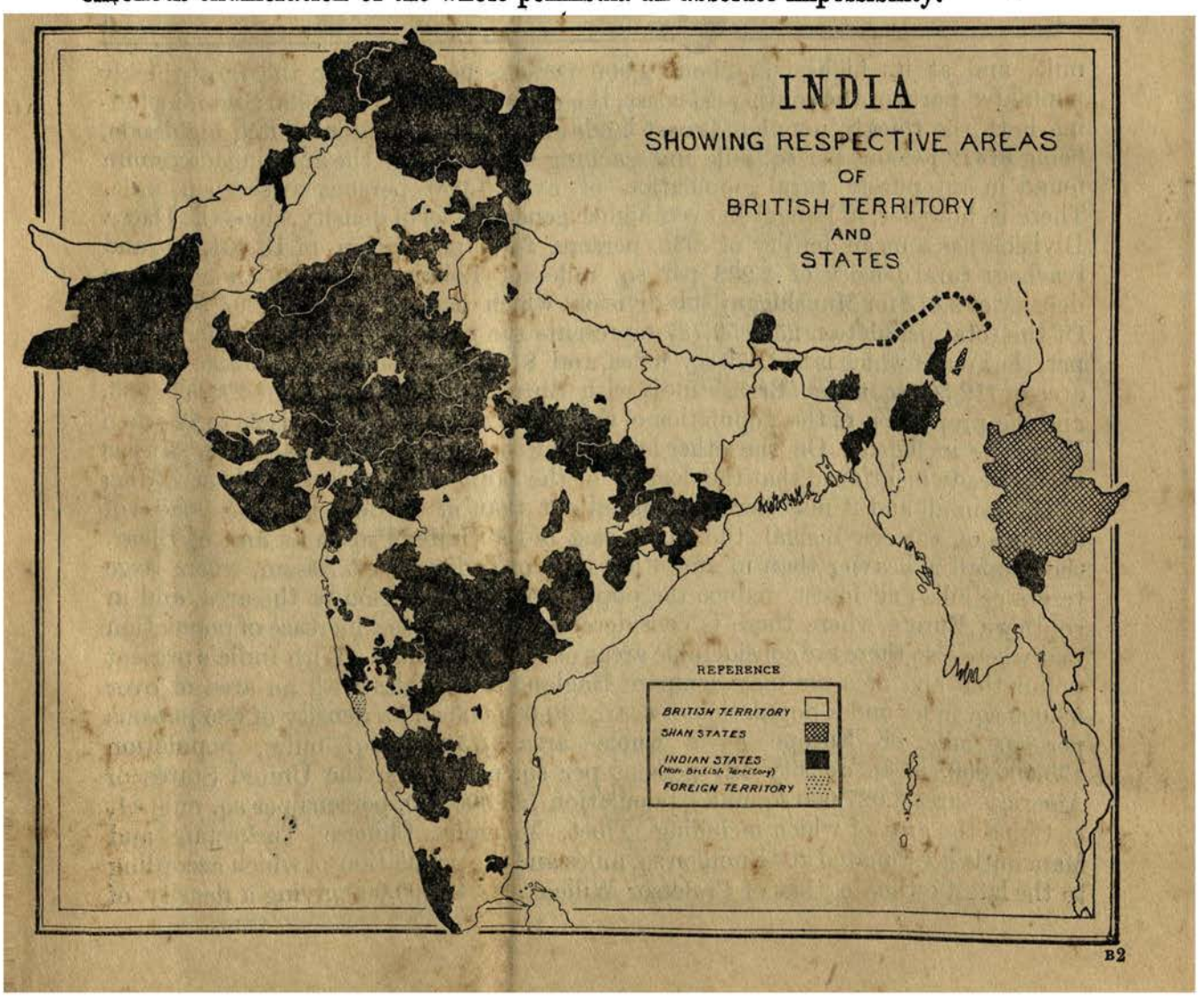
Natural and political divisions.

2. At the same time in spite of this great variety the existence for the most part of a uniform system of administration and of a fairly general distribution of the different racial types from which the population is drawn, together with a similar, if perhaps less even distribution of religious and social systems, contribute to give a certain uniformity, if not unity, to the whole, which in spite of local differences is obviously capable of a degree of national consciousness which increases with the spread of education. For the difficulty occasioned by great diversity

in treating India as a whole is experienced likewise to a more limited extent in each Province and in most States, since the political boundaries have generally little relation to any other. The difficulty of dealing with the population question by natural divisions is thus greatly enhanced. Obviously the density of the population is in immediate relationship to the conformation of the soil, to the rainfall and to the crops, all of which are inter-dependent, but since the boundaries of administrative units run counter to the divisions of nature, any treatment of the population according to natural divisions is likely to involve the dissipation of figures returned by administrative units into a set of entirely different combinations. This has been attempted for India as a whole on some previous occasions, but the information obtained by such a treatment, however interesting academically, is of little or no administrative value. Demography by natural divisions therefore has been limited to the individual reports of provinces, since in some of the provinces and states the natural divisions are less diverse from divisions political than they are when India is treated as a whole, and within the administrative unit may even be of some practical application.

External population.

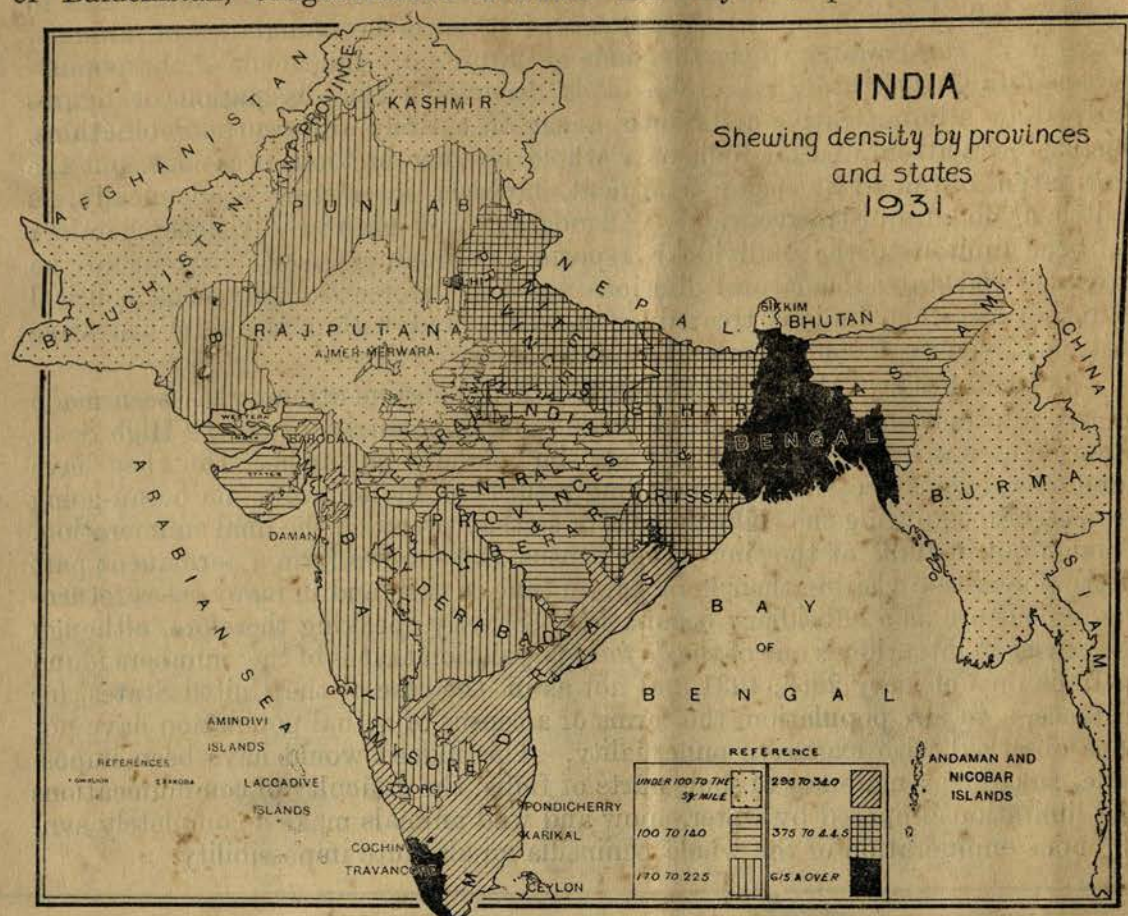
3. In addition to the actual population of India some attempt has been made to give information as to Indian nationals in other countries or on the High Seas. These figures are necessarily incomplete, but perhaps go further than they have done on previous occasions by including returns of Indian crews on ocean-going vessels shipped during the eight months or so that preceded the final enumeration. Though not in India at the time of the census, these crews form a permanent part of the population visiting their homes from time to time and in many cases returning agriculture as a subsidiary occupation. Strictly speaking therefore, although the census in intention is one of the *de facto* population that is of the numbers found in India on February 26th, 1931 and not as in the case of the United States, for instance, a *de jure* population, the terms of a census of actual population have not been observed with excessive punctuality. This indeed would have been impossible, since the remoteness of some parts of India, the difficulty of communications and limitations imposed by water, snow and wild animals make a completely synchronous enumeration of the whole peninsula an absolute impossibility.



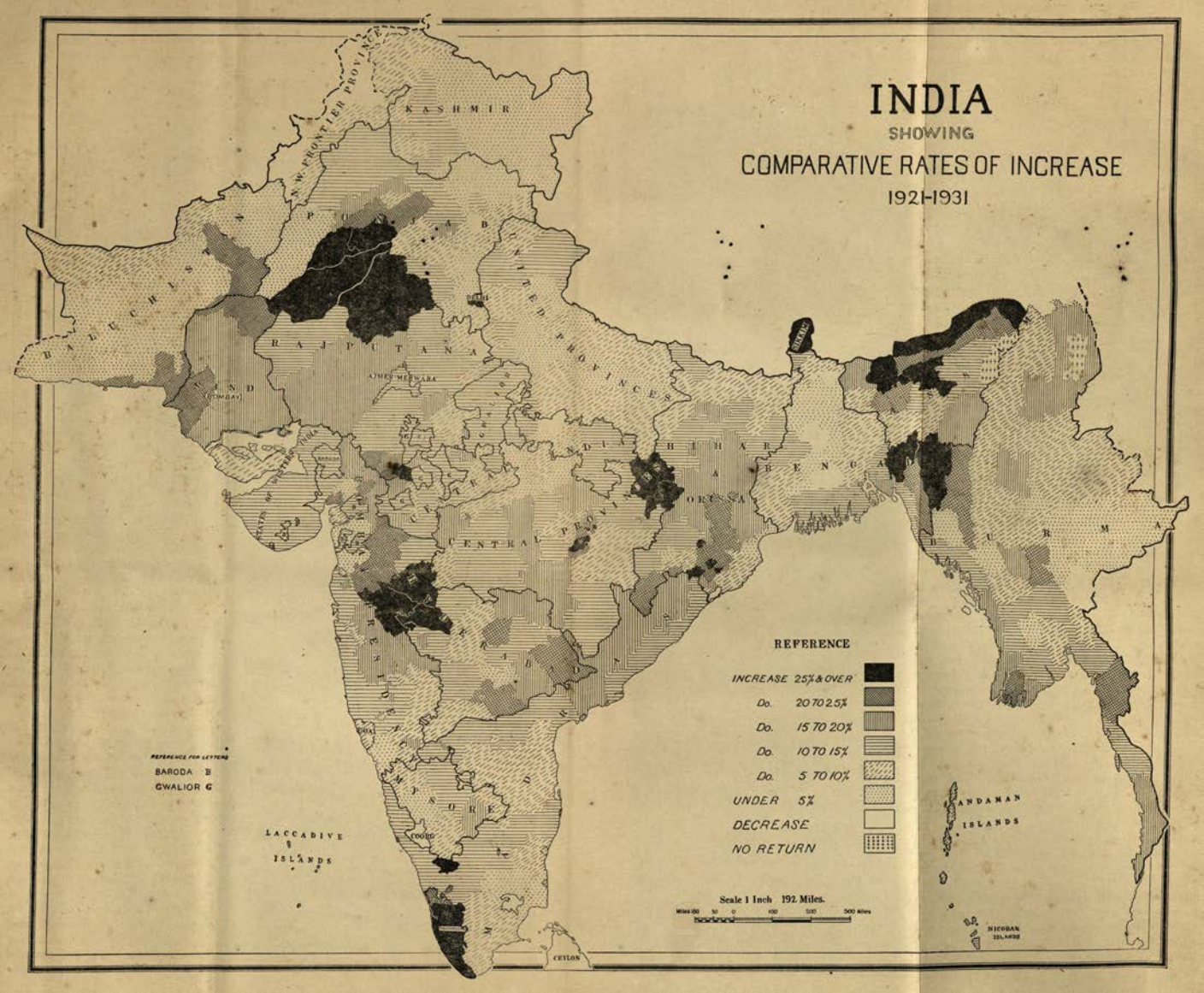
Section ii.—Distribution and Movement.

Area and Population.

4. The total area covered by this census amounts to 18 hundred thousand sq. miles and the population inhabiting it to 353 millions giving a density for the whole area of 195 persons per sq. mile. This density however is a very variable factor appearing at the lowest as 6·5 persons per sq. mile in the mean density of Baluchistan, Chagai District of which has only one person to the square



mile, and at its highest at about 2,000 persons per sq. mile in the most thickly populated parts of the south-west coast, the general density of Cochin State, including both the thickly populated coast lands and the almost uninhabited highlands, being 814·2 persons per sq. mile and reaching in one village the amazing maximum found in any purely rural population of over 4,000 persons to the sq. mile. There is, however, in Bengal an even higher general level of density, since the Dacca Division has a mean density of 935 persons for a population of 13,864,104, and reaches a rural density of 3,228 per sq. mile for Lohajang thana, and a mean density of 2,413 for Munshiganj sub-division which has an area of 294 sq. miles. Of the total population 256,859,787 represents the population of British India proper, the area of which is 862,679 sq. miles, and 81,310,845 that of the States with an area of 712,508 sq. miles. British India with Burma has a population of 271,526,933, and the proportion of the population of the States to British India is 23 to 77 when Burma is included. On the other hand if she be excluded it is 24 to 76. It has been already mentioned that the density of the population varies largely according to the rainfall and it may here be pointed out that in the densest areas—those of Cochin, of eastern Bengal, the north-east of the United Provinces and of Bihar, the rainfall is heavier than in any other part of India except Assam, where large tracts of hills and forest reduce the population in proportion to the area, and in southern Burma where there is considerable room for the increase of population and where also there are considerable areas of forest and hills. With India's present population and area we may compare England and Wales with an area of over 58,000 sq. miles and a population of nearly 40,000,000 and a density of 685 persons per sq. mile, or Europe as a whole—area 3,750,000 sq. miles, population 475,000,000, mean density 127 persons per sq. mile, with the United States of America—area 3,027,000 sq. miles, population 123,000,000, persons per sq. mile 41, or China the area of which including Tibet, Mongolia, Chinese Turkestan and Manchuria is estimated at 4¼ million sq. miles and the population of which according to the latest estimate, that of Professor Willcox, is 342,000,000 giving a density of


INDIA
SHOWING
COMPARATIVE RATES OF INCREASE
1921-1931
REFERENCE
INCREASE 25% & OVER
Do. 20 TO 25%
Do. 15 TO 20%
Do. 10 TO 15%
Do. 5 TO 10%
UNDER 5%
DECREASE
NO RETURN
Scale 1 Inch 192 Miles.
KASHMIR
N.W. FRONTIER PROVINCE
BALUCHISTAN
PUNJAB
UNITED PROVINCES
RAJPUTANA
AJMER-MERWARA
SIND
(BOMBAY)
STATES OF WESTERN INDIA
BARODA
CENTRAL INDIA
CENTRAL PROVINCES
BIHAR
ORISSA
BENGAL
ASSAM
BURMA
HYDERABAD
GOA
MYSORE
COORG
MADRAS
CEYLON
LACCADIVE ISLANDS
ANDAMAN ISLANDS
NICOBAR ISLANDS
REFERENCE FOR LETTERS
BARODA B
GWALIOR G

80·5 persons per sq. mile, though in the fertile areas it is of course much heavier than this. Indeed a more useful comparison should be with China proper, having an area of about 1½ million sq. miles and a general density of probably 200 to 220 persons per sq. mile. It may be added that the total population of the world is now estimated at about 1,850,000,000, and if this be the fact, the population of India forms almost one-fifth part of that of the whole world. It should be added, as regards area, that the Survey of India is now revising the official figures of the area of districts and provinces which will involve some modification of the figures given in the census reports. Revised figures were not ready in time to be utilised generally at this census, but the necessary changes in area and density are for the most part small and unimportant.

Movement.

5. The actual increase since 1921 is 33,895,298, that is to say, 10·6 per cent. on the population at the last census and 39 per cent. on the population of India fifty years ago and an increase of 12 persons per square mile in 50 years, during which time the increase in area has been principally, if not entirely, confined to comparatively thinly populated areas, and amounts to 426,055 sq. miles. These figures may be compared with an increase in England and Wales since last census of only 5·4 per cent., but of 53·8 per cent. in the last 50 years, with an increase in the United States of 16 per cent. since the last census, with an increase of nearly 18 per cent. in Ceylon and with an increase in Java of 20 per cent. since the last census and of as much as 26 per cent. in the outer islands of the Netherlands Indies. The population of Java is of course not comparable with that of India as a whole on account of its small size and limited area, but having (with Madura) the very high density of 817 persons per square mile it is comparable with the more densely populated parts of India already mentioned. This illustrates the fact that the density in India is so variable that it is impossible to consider the question of movement of the population without going into the question of the distribution and variation of density, for density of population in India depends not on industry, as in the United Kingdom, but on agriculture, and is greatest of course in the most fertile areas. At this census, however, the greatest increase is in the States, where generally speaking the density is lowest, and therefore the increase in the population shown by the figures of this census appears at first sight indicative of pressure upon the margin of cultivation, but while the greatest increase has been in Bikaner (41·9 per cent.) this must be put down largely to the increase of irrigation and to the consequent immigration from outside, and one of next highest increases is that of Travancore in which the density was already among the highest in India. The increase in Hyderabad State again is partly to be attributed to an increase of efficiency in the taking of the census and cannot therefore be safely used as a basis of any comparison of the population as it is now and was then. Obviously the greatest increase in population is to be expected in areas such as that of Burma where the rainfall is above the mean and the density of the population below it. Where the rainfall and the density are at balance, that is, where the population is dense and the rainfall is just adequate as in the southern Punjab, eastern Rajputana, United Provinces, Central India generally and H. E. H. the Nizam's Dominions, irrigation has abated the liability to complete loss of crop, and improved communications have made it possible to prevent heavy loss of life in times of scarcity, thus enabling the population to increase on the margin of subsistence. How high a population can be supported by agriculture when conditions are favourable, is shown by Cochin with areas here and there carrying over 2,000 and in one rural unit actually 4,090 persons to the sq. mile on land producing rice and coconuts, but principally the latter which leaves more room for the erection of buildings and brings in a higher return than rice in actual cash. In such areas, *e.g.* Cochin and Travancore, the increase in the population has been higher than in the sparsely

Census of	Population.	Period.	Increase.	Increase due to: Inclusion of new area.	Increase due to: Actual increase of population.	Total increase per cent.
1881 ..	253,896,330	1872-81	47,733,970	33,139,081	14,594,889	23·2
1891 ..	287,314,671	1881-91	33,418,341	5,713,902	27,704,439	13·2
1901 ..	294,361,056	1891-01	7,046,385	2,672,077	4,374,308	2·5
1911 ..	315,156,396	1901-11	20,795,340	1,793,365	19,001,975	7·1
1921 ..	318,942,480	1911-21	3,786,084	86,633	3,699,451	1·2
1931 ..	352,837,778	1921-31	33,895,298	35,058	33,860,240	10·6
Total ..	..	1881-31	98,941,448	10,301,035	88,640,413	39·0

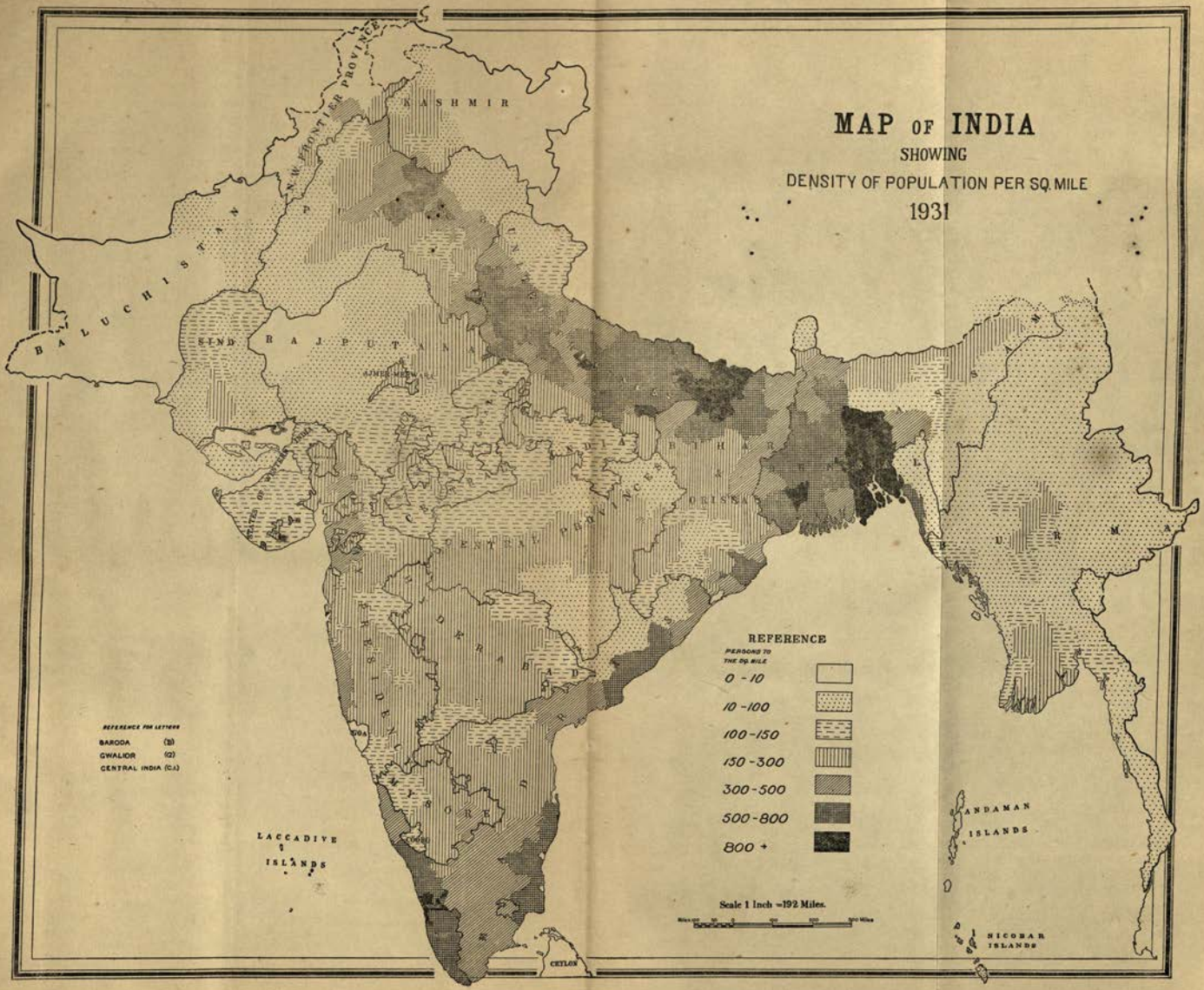
populated areas like Baluchistan or Jaisalmer State where there is no general extension of irrigation, although there would appear to be more scope for an extension of cultivation. On the other hand when these thickly populated areas are examined in detail it appears that the actual rate of increase in population is greatest in the less populated, and less fertile, areas. Thus in Travancore, there are three natural divisions the lowland—very fertile, the midland—less so, and the highlands, where the staple crop is tapioca and where irrigation is not practised. Now in these three natural divisions the density in 1921 was 1,403 persons to the sq. mile, 700 persons and 53 respectively, which increased during the decade to 1,743, 892 and 82, that is by 24·2, 27·4 and 54·7 per cent. respectively, showing a vastly higher rate of increase in the area of least density which is also the area of least fertility, though not as great a numerical increase. Similarly in Bengal the greatest rate of increase has been in the Chittagong Hill Tracts, and in Madras in the Nilgiris. Where, therefore, there is a population already dense, there is a clearly perceptible spread towards the less profitable land.

The increase of population has also been dependent in some cases on migration, while, on the other hand, the apparent increase may have depended on the failure to migrate. Thus the increase of 35 per cent. in Ahmadnagar district, a rather barren upland in the Deccan which suffers from recurring famines, is not due so much to a series of good years or to an extension of cultivation on the subsistence margin, as to trade depression, resulting in numbers of the population staying at home instead of migrating to the ports of Bombay and elsewhere where in normal years they are employed during the census months of February and March. Bombay shows a corresponding decrease, probably due, in the particular case of Bombay, largely to the same cause. Other decreases there are which are not so easy to explain.

Migration. 6. Immigration, when India is taken as a whole, influences the population very little. Table VI shows 730,562 persons as born outside India as against 603,526 in 1921, without taking count in either case of persons born in French or Portuguese possessions. The increase is almost entirely in persons born in Asiatic countries. Against this there must be set off on account of emigration about one million persons who are estimated as having emigrated during the decade under review. Migration, however, is of more importance as affecting internal fluctuations of populations, varying in British India from 1,244,249 (net) immigrants into Assam to 15,536 (net) immigrants into the North-West Frontier Province. These figures however include all those whose birth-place was outside the province, and do not refer to the decade 1921-31 only. If we take the actual increase due to immigration during the decade in Assam it is found to be only 121,648,* consequently if a percentage be taken on the increase of population Assam owes only 10·5 per cent. of its increase to immigration, though its immigration figure is the highest among all provinces. Conversely Bihar and Orissa with the greatest loss by emigration shows an increase of 10·8, a little more than that for all India, in spite of the fact that the total loss by emigration is equivalent to almost a third of the actual figure of increase. Migration as between British India and the States has tended in the past to be from the latter to the former, but during the last decade this position has been reversed and the trend of migration on the whole is from British India to the States, where the density is generally lower. Bikaner, where the immigrants total 161,303, *i.e.*, 58 per cent. of its increase in population, is a striking instance; the greater number of its immigrants (about 54%) come from British India, and while the natural increase of the population of Bikaner State *plus* the normal immigration as recorded in 1921 would have resulted in a general increase of 28 per cent. and thereby brought the population back to the 1891 level merely, the increase at this census is much in excess of that amount, and this excess may be put down entirely to the extension of irrigation.

Mortality. 7. Another factor to be considered is the relation of the birth-rate to the death rate and this factor is far from being the same in different sections of the population. How far the fecundity of different races and castes in India is the result of environment and how far it may have become an inherited racial trait fixed at some period in the past history of the people, and how far it depends on prevailing social practices, is extremely difficult to determine in the light of the existing information, but it is easy to show that there is marked variation in different parts of India and

* *Vide* Assam Census Report, 1931, page 11.


MAP OF INDIA
SHOWING
DENSITY OF POPULATION PER SQ. MILE
1931
KASHMIR
N.W. FRONTIER PROVINCE
BALUCHISTAN
SIND
RAJPUTANA
AJMER-MERWARA
CENTRAL PROVINCES
ORISSA
BURMA
ANDAMAN ISLANDS
NICOBAR ISLANDS
LACCADIVE ISLANDS
CEYLON
REFERENCE
PERSONS TO THE SQ. MILE
0 - 10
10 - 100
100 - 150
150 - 300
300 - 500
500 - 800
800 +
REFERENCE FOR LETTERS
BARODA (B)
GWALIOR (G)
CENTRAL INDIA (C.I.)
Scale 1 Inch = 192 Miles.

this question will be reverted to in the chapters on age and sex. Meanwhile it is enough to point out that in India the birth rate is everywhere much higher than in Europe, largely on account of the universality of marriage, the Parsis being perhaps the only Indian community in which late marriage and small families are the rule instead of the exception. The birth-rate is lower among the Hindus than in most of other communities probably to some extent on account of the general disapproval of widow remarriage, resulting in larger numbers of women being unreproductive at the child-bearing age, and to some extent on that of the greater prevalence of immature maternity. On the other hand, the high birth rate of India is largely discounted by a high death rate, particularly among infants as also apparently among women at child-birth. Here again social factors have to be reckoned with, the custom of purdah perhaps exercising its worst effect among the poorer class of Muslims who appear to be more rigid in its observance than the corresponding class of Hindus. This effect is particularly noticeable in crowded urban areas, in which the space available to a woman in purdah and poor circumstances is so small as seriously to affect her health. In the matter of epidemics and of deaths from famine or want, the decade has been particularly favourable to an increase in population. It is true that the influenza epidemic at the end of the previous decade is believed to have fallen most severely on the most reproductive ages and should therefore have had a much more lasting effect than the reduction caused by famine which takes the oldest and the youngest first. There has, however, been no serious famine in the decade under review, and every year sees improved methods of fighting such epidemics as cholera, plague or *kala azar*. Indeed a completely effective treatment for the latter pest has been perfected since the last census, and has made it possible to stamp out the disease. The antimony treatment of *kala azar* was discovered as early as 1913, but the original treatment took three months to apply and therefore did little to prevent the epidemic. The treatment with organic antimony compounds, introduced about 1917, reduced the period of treatment to a month. The improved treatment introduced during the 1921-31 decade however cures the disease in ten days or even less.

Comparison between deduced and enumerated population.

Province (British Territory only).	Variation 1921-1930 according to Vital Statistics (excess of births over deaths+, deficiency —).	Variation 1921-1931 according to Census (excess+, deficiency—)., total population.	Difference Excess or defect of column 3 on column 2.	Population under registration 1921.	Difference per cent. of population under registration.†
1	2	3	4	5	6
Assam	+450,854	+1,163,123	+712,269	6,852,242	+10·39
Bengal	+1,463,484	+3,411,695	+1,948,211	46,522,293	+4·19
Bihar and Orissa ..	+3,254,095	+3,682,158	+428,063	34,004,546	+1·26
*Bombay	+1,728,161	+2,587,404	+859,243	19,165,614	+4·48
Burma	+715,458	+1,454,954	+739,496	10,822,618	+6·83
Central Provinces and Berar.	+1,423,608	+1,594,963	+171,355	13,912,760	+1·23
Delhi	+53,132	+147,794	+94,662	500,539	+18·91
Madras	+4,398,902	+4,421,122	+22,220	41,002,696	+0·05
North-West Frontier Province.	+94,759	+173,736	+78,977	2,135,573	+3·70
Punjab	+2,428,382	+2,895,374	+466,992	20,517,606	+2·28
United Provinces ..	+3,927,768	+3,033,694	—894,074	45,375,787	—1·97
Total ..	+19,938,603	+24,566,017	+4,627,414	240,812,274	+1·92

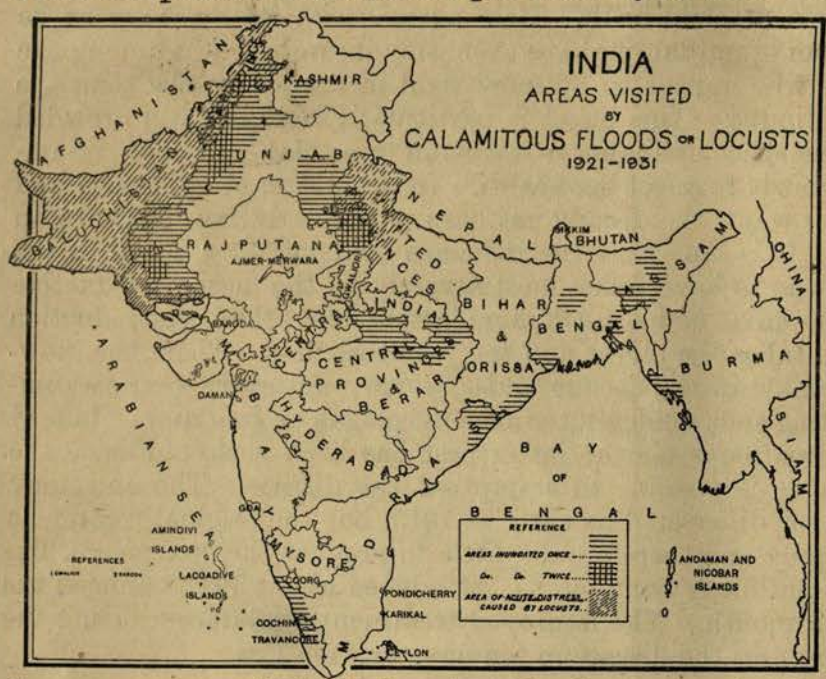
* Excludes Aden.

† The variation shown in this column would of course be less in the case of excesses or more in the case of deficiency had the population under registration shown in column 5 been annually adjusted by deducting reported deaths and adding reported births.

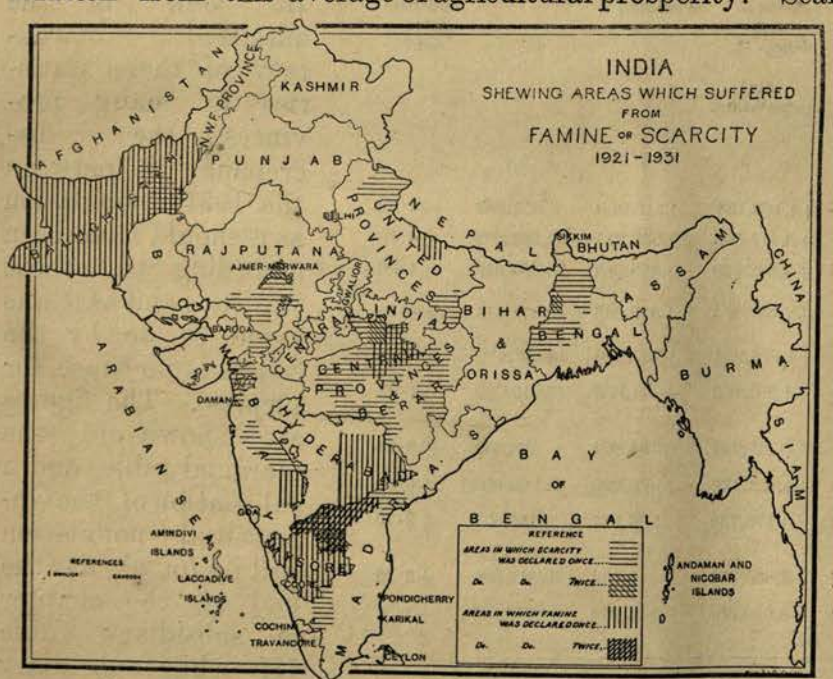
A brief reference to vital statistics will be found in Section 76 (Chapter IV) below. In view of the admitted inaccuracy of these statistics in many provinces, the discrepancy between the 1931 population as it should have been according to those statistics and as it was found to be by the census is no cause for surprise. The figures are shown in the marginal table, and a calculation of the intercensal population will be found at the end of the chapter in subsidiary Table III, while subsidiary Tables VIII to XI contain additional material with reference to vital statistics.

8. As regards scarcity, improvements in communications, and consequently in ease of distribution, nowadays prevent anything like the famine mortality Economic.

of a century ago, while taking India as a whole the decade ending in 1931 was a prosperous one in the matter of crops, the general economic depression that has supervened having been little apparent outside one or two restricted areas until 1931 itself, so that for a population mainly agricultural the conditions have been very favourable to an increase in population. Nevertheless the decade opened, as it has since closed, in gloom. The frontier was disturbed ; the Moplahs were in rebellion ; there was trouble in the Madras Agency tracts ; the effects of influenza and the bad monsoon of 1920 were still active ; trade was depressed ; prices were high ; finances were embarrassed, and the non-co-operation movement was rampant. From this position there was a rapid recovery ; a series of good harvests followed



almost all over India. In Bengal there were floods, it is true, and floods proved to be the principal cause of local distress and scarcity during the decade in India generally, as no province completely escaped the inundation of some portion in the ten years under review. But taking India as a whole the first five years were generally above the average, or little below it. Famines were local and not very serious, though one unfortunate district in Madras had famine declared in it officially in three seasons. Almost to the end of the decade the prices of cotton remained consistently remunerative. The end of the decade showed the most deterioration from this average of agricultural prosperity. Scarcity in some parts, *e.g.*, in the United Provinces, and the heavy fall in the prices of agricultural produce recreated a position not unlike that of the beginning of the decade, but with the additional embarrassment of a population greatly increased by the intervening prosperity. Wages however did not fall as rapidly as prices, and up to the time of the census agricultural



prosperity on the whole was greater than ten years before, though the increase in population had diminished the size of holdings. Trade and industry followed much the same course, since the depression, though severely felt by the tea industry as early as 1928, had only just become general by the time of the census. On the other hand much permanent improvement had been carried out in communications everywhere, and a new port for ocean-going steamers had been constructed at Cochin and another begun at Vizagapatam.

Above all a number of large schemes of irrigation and hydro-electric power development have been completed, particularly in the north-west and south of India. Public health has been exceptionally good during the decade; cholera and plague took much less than their usual toll of life, and *kala-azar* was suppressed by the perfection of an easy cure. The general rise in prosperity throughout the decade is indicated by the comparative deposits in savings banks and state of co-operative societies in 1921 and 1931, tables of which are given in the statements below:—

Post Office Circle.	Post Office Savings Bank Deposits.					
	No. of Banks.		No. of accounts.		Amount of deposits in rupees.	
	1920-21.	1930-31.	*1920-21.*	1930-31.	*1920-21.*	1930-31.
Bengal and Assam	*2,740*	3,141	*528,427*	615,785	*5,27,34,019*	8,99,83,627
Bihar and Orissa ..	*895*	1,037	*124,361*	158,943	*1,26,42,858*	2,55,71,070
Bombay*	*1,627*	1,823	*375,170*	333,793	*4,85,15,721*	5,66,65,593
Burma	*362*	511	*70,017*	87,246	*72,84,237*	1,26,25,298
Central	*801*	1,234	*95,569*	129,045	*1,27,62,966*	2,10,15,173
Madras	*1,838*	2,279	*207,675*	380,358	*1,40,38,563*	2,56,08,800
Punjab and N.-W. F. P.†	*997*	1,076	*241,494*	358,563	*4,48,87,062*	6,76,83,111
United Provinces ..	*1,453*	1,485	*235,244*	347,269	*3,57,68,516*	5,90,40,642
Sind and Baluchistan	..	260	..	66,611	..	1,20,66,560
Total ..	*10,713*	12,846	*1,877,957*	2,477,613	*22,86,33,942*	37,02,59,874

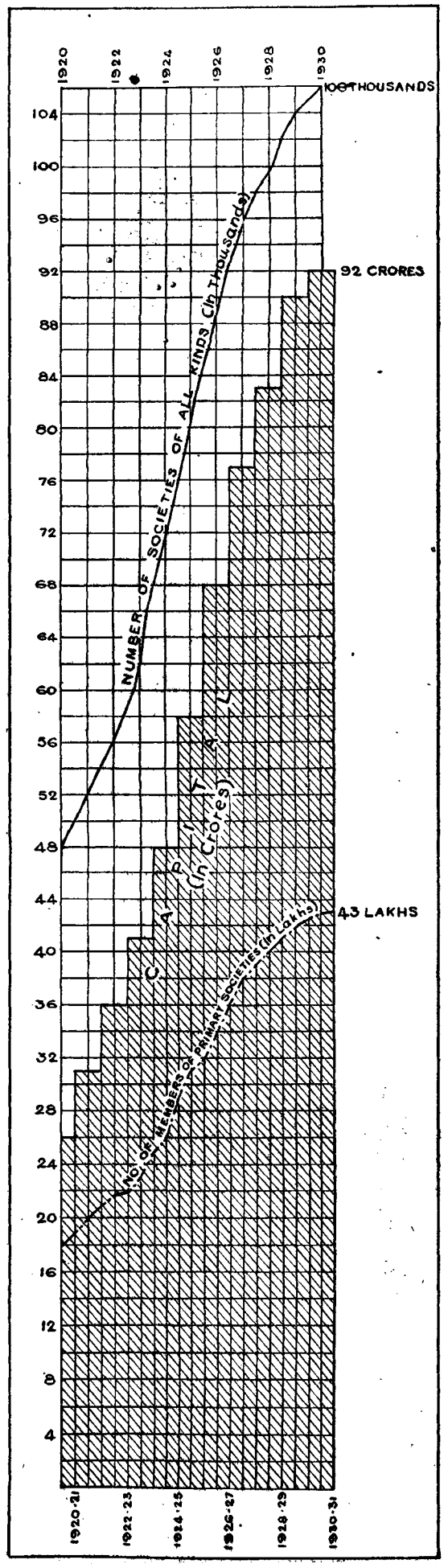
**Includes Sind in 1920-21 only.* †*Includes Baluchistan in 1920-21 only.*

The number of Co-operative Societies has more than doubled during the decade, which opened with 47,503 societies and closed with over 100,000, while the number of members of primary societies increased from 1,752,904 to 4,308,262, of whom more than two-thirds are agricultural. Five states which did not appear at all in the statements of 1920-21 have

Post Office Circle.	Five-year Cash Certificates Issue.	
	Cash price realised from certificates.	
	In 1920-21.	In 1930-31.
	Rs.	Rs.
Bengal and Assam	*13,25,583*	1,69,42,242
Bihar and Orissa	*2,72,753*	39,59,736
Bombay	*13,72,843**	2,79,81,653
Burma	*1,85,628*	24,56,292
Central	*3,01,080*	80,80,370
Madras	*2,90,114*	69,37,890
Punjab and N.-W. F. P.	*7,25,353*†	2,63,83,786
United Provinces	*7,13,908*	1,53,60,699
Sind and Baluchistan	..	97,24,748
Total ..	*51,87,262*	11,78,27,416

*Includes Sind. † Includes Baluchistan.

PROGRESS OF THE CO-OPERATIVE MOVEMENT IN INDIA 1920-21 to 1930-31



been added to the returns of 1930-31, *viz.*, Cochin, Gwalior, Indore, Jammu and Kashmir and Travancore. It will be seen therefore that inspite of the decline at the end of the decade into a condition of low prices, trade depression non-co-operation and rebellion, this time in Burma, similar to that with which the decade opened if not worse, there still remained at its close many of the economic benefits accumulated during the interval, though they are subject to the greatly enhanced liability of the additional population of approximately 34 millions to the propagation of which the prosperous years had so greatly contributed.

Province or State.	Total no. of societies.		Number of members (primary societies).	
	1920-21.	1930-31.	*1920-21.*	1930-31.
India	47,503	**106,166**	1,752,904	**4,308,262**
British Provinces	43,366	**90,064**	1,600,476	**3,681,300**
Ajmer-Merwara	*522*	654	*17,296*	18,608
Assam	*560*	1,413	*28,084*	69,569
Bengal	*6,366*	23,614	*232,001*	760,812
Bihar and Orissa	*3,580*	9,404	*107,514*	254,462
Bombay	*2,956*	5,896	*265,629*	572,669
Burma	*4,888*	2,972	*125,318*	85,741
C. P. & Berar	*5,011*	4,109	*79,638*	76,615
Coorg	*142*	253	*6,565*	14,037
Delhi	*103*	275	*2,011*	7,795
Hyderabad (*Administered Area*)	*5*	18	*205*	6,173
Madras	*6,287*	14,878	*395,284*	979,745
N.-W. F. P.	..	257	..	7,722
Punjab	*8,453*	20,698	*230,311*	679,616
United Provinces	*4,493*	5,623	*110,620*	147,736
States	4,137	**16,102**	152,428	**626,962**
Baroda	*509*	1,047	*16,932*	37,321
Bhopal	*691*	1,189	*10,446*	20,611
Cochin	..	210	..	24,328
Gwalior	..	4,071	..	70,307
Hyderabad	*1,437*	2,157	*35,293*	53,120
Indore	..	506	..	13,366
Kashmir	..	2,899	..	54,222
Mysore	*1,500*	2,213	*89,757*	134,428
Travancore	..	1,810	..	219,259

Province or State.	Share capital paid up.		Loans and deposits held at the end of the year.		Reserve and other Funds.		Total.	
	1920-21.	1930-31.	*1920-21.*	1930-31.	*1920-21.*	1930-31.	*1920-21.*	1930-31.
	(*In thousands of rupees.*)							
India	4,05,25	**12,40,83**	20,23,02	**69,18,27**	2,14,66	**10,32,12**	26,42,93	**91,91,22**
British Provinces	3,53,59	**10,60,16**	18,87,90	**63,92,31**	1,99,40	**9,07,08**	24,40,89	**83,59,56**
Ajmer-Merwara	*7,04*	6,73	*32,58*	30,90	*2,85*	9,67	*42,47*	47,30
Assam	*2,36*	8,09	*12,17*	59,94	*2,31*	10,01	*16,84*	78,04
Bengal	*42,28*	1,98,92	*2,64,63*	12,04,27	*26,37*	1,59,32	*3,33,28*	15,62,51
Bihar and Orissa	*10,57*	56,42	*1,02,10*	4,77,60	*10,27*	54,88	*1,22,94*	5,88,90
Bombay	*46,18*	1,77,46	*2,70,62*	11,08,35	*17,77*	1,04,91	*3,34,57*	13,90,72
Burma	*55,23*	88,78	*2,23,25*	1,05,19	*28,42*	75,07	*3,06,90*	2,69,04
Central Provinces and Berar.	*26,49*	34,57	*2,56,87*	4,30,99	*16,14*	66,17	*2,99,50*	5,31,73
Coorg	*99*	2,75	*53*	5,81	*60*	2,47	*212*	11,03
Delhi	*13*	2,59	*82*	20,37	..	2,11	*95*	25,07
Hyderabad (*Administered Area*)	*19*	1,96	*11*	3,10	..	26	*30*	5,32
Madras	*64,87*	2,42,16	*4,07,66*	14,39,78	*18,37*	1,27,94	*4,90,90*	18,09,88
N.-W. F. P.	..	2,08	..	10,44	..	43	..	12,95
Punjab	*69,52*	1,81,15	*2,33,03*	13,72,21	*57,99*	2,50,93	*3,60,54*	18,04,29
United Provinces	*27,74*	56,51	*83,53*	1,23,36	*18,31*	42,91	*1,29,58*	2,22,78
States	51,66	**1,80,66**	1,35,12	**5,25,96**	15,26	**1,25,04**	2,02,04	**8,31,66**
Baroda	*1,85*	5,80	*21,08*	59,45	*2,78*	9,69	*25,71*	74,94
Bhopal	*29*	*1,31*	*11,23*	14,90	*18*	8,36	*11,70*	24,57
Cochin	..	3,03	..	15,15	..	3,06	..	21,24
Gwalior	..	15,03	..	56,06	..	20,53	..	91,62
Hyderabad	*15,17*	45,41	*65,91*	1,39,62	*5,36*	23,12	*86,44*	2,08,15
Indore	..	3,51	..	37,79	..	13,46	..	54,76
Kashmir	..	24,42	..	56,74	..	16,57	..	97,73
Mysore	*34,35*	48,89	*36,90*	1,16,34	*6,94*	24,09	*78,19*	1,89,32
Travancore	..	33,26	..	29,91	..	6,16	..	69,33

Section iii.—Provincial distribution and variation.

9. Ajmer-Merwara is a small province with an area a little less than that of Co. Cork or a little more than that of Devonshire and a population of little more than that of all Connaught or of Midlothian. It is administered by a Commissioner under the Agent to the Governor General in India for Rajputana, by the States of which it is entirely surrounded, and consists of the city and sub-division of Ajmer, the adjacent but detached sub-division of Kekri, **Ajmer-Merwara.**

—	Area in sq. miles.	Population.	Density.	Variation of population per cent. 1881 to 1891.	1891 to 1901.	1901 to 1911.	1911 to 1921.	1921 to 1931.	1881 to 1931.
Ajmer-Merwara	**2,711**	**560,292**	**207**	**+17·7**	**—12·1**	**+5·1**	**—1·2**	**+13·1**	**+21·6**
Ajmer and Kekri	2,070	423,918	205	+17·6	—13·0	+3·5	—0·4	+11·9	+18·0
Ajmer City	*17*	*119,524*	*7,031*	*+41·3*	*+7·3*	*+16·8*	*+31·7*	*+5·3*	*+145·3*
Merwara	641	136,374	213	+18·3	—8·8	+10·6	—3·9	+17·2	+34·4

and the tahsils of Merwara, the ancient domain of the Mers, as well as small detached areas which are included in one or other of these units. The population, though the highest yet recorded, only exceeds that of 1891 by less than 18,000 persons. The present census shows an actual increase of 13·1 per cent. for the decade, which probably represents a natural increase of 16·6 per cent. since the 1921 population was swollen by the Khwaja Sahib's *'Urs*. The agricultural produce of Ajmer and Merwara is not enough to support its population and some 360,000 maunds of grain are imported annually. Railway workshops in Ajmer employ many hands.

10. Of the Andaman and Nicobar Islands, which form the charge of a Chief Commissioner directly under the Government of India, the islands of Great Andaman are in the process of development from a penal to a free settlement, the aboriginal population being far on the road to extinction. The density of the Andamans is **Andaman and Nicobar Islands.**

Administrative and Natural Division.	Area in square miles.	Population.	Density.	Variation of population per cent. 1881 to 1891.	1891 to 1901.	1901 to 1911.	1911 to 1921.	1921 to 1931.	1901 to 1931.
Andaman and Nicobar Islands.	**3,143**	**29,463**	**9·37**	..	..	**+7·3**	**+2·4**	**+8·8**	**+19·5**
Andamans	*2,508*	*19,223*	*7·66*	+6·7	+16·2	—2·7	+1·0	+7·9	+6·0
Nicobars	*635*	*10,240*	*16·1*	..	..	+35·4	+5·1	+10·4	+57·3

7·66. Sentinel Island and Little Andaman are still inhabited by Andamanese only, and the Nicobars are likewise occupied almost entirely by Nicobarese except for a few foreign traders, who come to the islands for pearl shell, *bêche-de-mer* and coconuts, by an Assistant Commissioner and by a few police. The density of the Nicobars is 16·1 persons per square mile. The convict population which was and is by far the most numerous element in the population of the Andamans has been much reduced on account of the policy of abolishing transportation to the Andamans. The figures of the foreign population, including convicts and *ex*-convicts, show a steady increase of Burmese and Karens. The climate suits them and they are accustomed to similar surroundings and the indications are that the permanent population of the islands will ultimately be predominately Burmese.

The most striking figures for these islands are those for the indigenous Negrito population which has shown a decrease respectively of 42, 30, 40 and 41 per cent. at each successive census of this century and a total decrease of over 75 per cent. since 1901 alone. If the present rate of decrease continue much longer the Andamanese will be extinct by the end of this century. The Census Superintendent in his report is content to damn with faint praise the policy of civilizing the aborigines and the institution of the 'Andaman Home', but that policy, now abandoned, resulted in the space of 7 decades in a greater curtailment of human life than the Andamanese themselves are likely to have effected by their more direct methods

in as many centuries. In the Nicobars on the other hand, whence the penal settlement was removed in 1888, there has been an increase of 10·4 per cent. since 1921 in spite of the deficiency of females, who are only 881 to every 1,000 males. The ratio of females to males has increased by 112 per mille since 1921 when the ratio was 769 females per 1,000 males, and by 40 per mille during the present century. If Nicobarese of tribal religion alone be examined the increase in the sex ratio is from 866 females per 1,000 males in 1921 to 939 in 1931.

Assam.

11. Assam with a present population of a nine and quarter million shows an increase since 1921 of 15·7 per cent. The decade from the point of view of public health has been "the best in the history of Assam", and the tea industry, which is, of course, the main industry of the province beyond ordinary agriculture, was on the whole in a flourishing condition, starting the decade with a recovery from the depression of 1919-1921, booming in 1923 and 1924 and remaining prosperous until the end of 1927, when the present depression began to be felt as a result of foreign competition and over-production. The increase in population, in spite of being the highest recorded in Assam, has been mainly due to natural increase and not to an increase by immigration which only formed ten per cent. of the total. The general economic condition of the cultivator does not seem to have deteriorated up to 1929 in spite of a general tendency to decay on the part of the cottage industries. Up to that year the price of agricultural produce had increased and expenditure on luxuries was found by the Assam Banking Enquiry Committee to have increased likewise. The standard of living had gone up, and so also apparently had expenditure on marriage and other ceremonies. This had involved increased indebtedness and "the average agriculturalist has not learned the importance of saving". The increase in population has extended to the whole province, Hills and Plains districts alike, but is lowest in the Surma Valley, which is the most densely populated part and but little affected by migration. The area of the province has been slightly extended on the frontier towards Burma, but that extension of area has only accounted for 1·25 per cent. of the increase. The area of Assam is 67,334 square miles and its population is 9,247,857 having a mean density of 137 to the square mile. This density, however, is a very variable matter. In the Surma Valley the density is 438 per square mile, and naturally the increase in population has been least in this area. In the Brahmaputra valley it is 171, and it is in this area that immigration is most active; in the Hills, which generally speaking afford a scanty subsistence to scattered villages, the density is only 39. There are no industrial towns in the province of any size or importance. The population is of a very mixed character. In the Brahmaputra valley the indigenous population consists of Bodo and Shan tribes mostly Hinduised, and with an aristocracy of caste Hindus ultimately of foreign extraction but, like the small Muslim population settled in the 17th century, completely identified with the country and the people of the valley by a residence of many generations. The recent immigrants consist either of tea garden coolies, mostly aboriginals from the Madras Agency Tracts, the Central Provinces and Chota Nagpur, who take up land and settle down in the country, and of Muslim cultivators from Maimansingh District in Bengal who have of recent years swarmed into the lower districts of the valley and opened up large areas of waste land. Prolific breeders and industrious cultivators but unruly and uncomfortable neighbours, these immigrants threaten to swamp entirely the indigenous inhabitants and in the course of two or three decades to change the whole nature, language and religion of the Brahmaputra valley and to assimilate it to the Muslim areas of Sylhet, where the population is not Assamese but essentially Bengali, whether Muslim or Hindu. In the other district of the Surma Valley, the plains part of Cachar, the last stronghold of the Kachari kings and once completely Kachari

Provincial and Natural Divisions.	Area in square miles.	Population.	Density.	Variation of population per cent. 1881 to 1891.	1891 to 1901.	1901 to 1911.	1911 to 1921.	1921 to 1931.	1881 to 1931.
Assam ..	67,334	9,247,857	137	+ 6·8	+11·8	+15·2	+13·2	+15·7	+ 80·3
Brahmaputra Valley ..	27,692	4,723,293	171	+10·0	+ 5·8	+18·7	+24·1	+22·5	+109·8
Surma Valley	7,450	3,262,029	438	+11·5	+ 5·3	+10·8	+ 3·3	+ 7·2	+ 44·1
Hills	32,192	1,262,535	39	—22·1	+77·7	+18·5	+ 8·2	+15·6	+105·3

in character, has become a Bengali colony entirely submerging the indigenous Kachari, who has retained his tribal nationality only in the North Cachar Hills. There as in the rest of the Hill districts the indigenous tribes still hold their own, resentful of the intrusion of the plainsmen whether Bengali or Assamese and maintaining their own languages and distinctive cultures and racially belonging for the most part to Burma rather than to India.

Baluchistan.

12. Baluchistan, the most sparsely populated of any province of India, occupies an important strategical position between Afghanistan, India and Persia, while the peninsula and immediate hinterland of Gwadar on its south-west coast is in the possession of the Sultan of Muscat and excluded from the scope of the Census of India. The province consists of British Baluchistan, of Agency Territories, of Tribal areas and of the States of Kalat and Las Bela; the Agency Territories are grouped with British Territory for administrative purposes and include four tahsils held on lease from the Khan of Kalat. British Baluchistan covers 7 per cent. only of the total area of the province and contains 16 per cent. of the total population, but these figures become 40 and 53 respectively if all the areas under British administration area added to what is strictly British territory. In an area so scattered that the charge of a single enumerator involved the travelling of distances of from 50 to 150 miles, a generally synchronous census was obviously an impossibility, and, the regular synchronized census on the standard schedule covered only 200 square miles and a population mostly alien. The difficulties of obtaining an accurate census are further enhanced by the nomadic character of the population, which is constantly moving from one part of the country to another in search of pasturage or work, and by the periodic movements not only of the local population towards Sind, Afghanistan or Persia in the autumn, but also of foreign nomads from Afghanistan into and through Baluchistan in the winter. These nomads return in the spring, and in the summer Quetta with its cool climate is becoming a seasonal resort from the overbearing heat of Sind. The census therefore of Baluchistan is a census of her winter population and does not necessarily represent with any accuracy the population to be found there in the summer months, which the Census Superintendent estimates at 974,000. The mean density of Baluchistan is 6 persons per square mile, a little more than Tibet with 4 and about the same as Newfoundland exclusive of Labrador; but this density falls in the Chagai district to 1 person per square mile. The decade started with a period of famine resulting from the drought of 1920-21 and although the years 1923-25 were good the later years were afflicted by locusts and the decade as a whole was below the usual level of prosperity. As a result of famine and scarcity and of the damage done by the invading sands of the Chagai deserts, which bury and lay waste the cultivated areas to the south and east of them and choke both sources and channels of irrigation, the province lost some thousands of its scanty indigenous population by migration. Prices ruled high until 1930 when they fell to a level phenomenally low. Health was poor and to the disease which naturally follows famine conditions were added serious epidemics of cholera, small-pox and measles. A general increase of motor traffic has almost caused the disappearance of animal-drawn vehicles during the decade, and 132 miles have been added to railways. The population increased by 69,000, of which 39,500 represents a natural increase, but the phenomenal increase of 45·5 per cent. in the Tribal Areas is not entirely beyond suspicion, and if the natural population of Baluchistan be alone considered, the 1911 figure has not yet been recovered. The population is far from uniform in character comprising as it does Brahui, Baloch, Lasi and Makrani with their satellite tribes of Loris, Dehwars, Langahs and Naqibs to say nothing of Pathans and Jatts and Persians. The country is of great historical importance

Administrative Unit.	Area in square miles.	Population.	Density per square mile.	Variation of population per cent. 1901 to 1911.	1911 to 1921.	1921 to 1931.	1901 to 1931.
Baluchistan ..	*134,688*	*868,617*	·6	+8·0	—4·2	+8·6	+7·1
British Territory	9,084	136,793	9	+9·3	+1·1	+6·7	+17·7
Agency Territories.	37,864	271,491					
Tribal Areas ..	7,280	55,224	8	+1·3	+6·3	+45·5	+56·7
States ..	80,410	405,109	5	—1·9	—9·8	+6·9	—5·5
Kalat ..	*73,278*	*342,101*	*5*	*—3·6*	*—8·6*	*+4·2*	*—8·2*
Las Bela ..	*7,132*	*63,008*	*9*	*+9·1*	*—17·2*	*+24·3*	*+12·3*

and the researches in recent years of Sir Aurel Stein indicate that Baluchistan was once a fertile country supporting a large population, where it now offers a scanty subsistence steadily dwindling under the encroaching sand.

Bengal.

13. Bengal, ninth of the provinces of India in area, is first in respect of population. The British districts cover 77,521 sq. miles, exclusive of large surfaces of river and estuary, and the Bengal States 5,434. To these for census purposes was added Sikkim State, another 2,818 sq. miles. Thirty sq. miles have been added since 1921 from Bihar and Orissa but changes in calculation of area have increased the size shown in the tables by an additional 678 sq. miles. The total population returned is 51,087,338 for Bengal (of which 50,114,002 were in British and 973,336 in State territory) and 109,808 for Sikkim, the population of Bengal being more than one-sixth of the total for British India. The density in British Bengal is now 646 persons per sq. mile, while that of Sikkim is only 39. Excluding Calcutta the density of Bengal varies from 2,105 in Howrah district to 43 in the Chittagong Hill Tracts, but by far the greater part of the province has a density of over 500 to the sq. mile, and if smaller units are taken a much higher rural density is found in many places, Dacca Division having a mean density of 935, Munshiganj sub-division of 2,413, and Lohajang thana of 3,228 per sq. mile. The rate of increase of population has been 7·3 per cent. since 1921 and that of Sikkim 34·4 per cent. Cooch Behar State is one of the few in India that shows a decrease since 1921. This decrease, 0·27 per cent., is entirely Hindu (—4·76%) and is attributed to the expansion of settled cultivation by Muslims which has the effect of driving the Hinduised tribes, Koch, Mech, Poliya, etc., into the foothills or eastwards into Assam, a process observed likewise in the adjoining Bengal districts. It is also suggested that this decrease is partly due to changes in social custom, such as the abandonment of widow remarriage, as part of a campaign of social elevation, and to changes in environment unfavourable to pre-existing adaptations. Tripura State on the other hand, with only 93 persons to the sq. mile, has experienced an increase of 25·6 per cent., and the thinly populated Chittagong Hill Tracts one of 22·9 per cent. Conditions during the decade from the economic standpoint are described as having been "not entirely unsatisfactory". Harvests have been generally good and prices high until 1929, though there have been severe floods in three years, some cyclones and an earthquake. Wages were high till 1930, but their high level was of little benefit to middle class families with fixed incomes, and it was the skilled workman who reaped the most benefit. In industry cotton mills have been prosperous throughout, and jute until 1929; tea was prosperous till 1927; coal has not been prosperous. Throughout Bengal there seems to have been a general rise in the standard of living, not shown in an improved or more expensive diet, though it is reported that the need for a better balanced dietary is indicated by the fact that an ordinary cultivator is found to improve and gain weight on prison fare, but in minor amenities such as umbrellas and shoes, shirts and coats "now worn by thousands who would never have dreamt of wearing them ten years ago", while the hurricane lantern is almost universally displacing the indigenous oil lamp. In some areas union boards are taking advantage of their powers to tax the union for schemes of village improvement such as the clearing of jungle, maintenance of roads and the excavation of tanks or wells. On the other hand increased earnings have not led to any reduction of the indebtedness of the ryot or labourer. The average debt of an agricultural family seems to be about Rs. 180 and that of a non-agricultural one perhaps a little more, while the average debt of the total population is about Rs. 166 per household. The debts of members of co-operative societies have increased by 3·5 per cent. to which borrowing to forestall the Sarda Act has largely contributed.

Province or State.	Area in sq. miles.	Population.	Density.	Variation of population per cent.					
				1881-1891.	1891-1901.	1901-1911.	1911-1921.	1921-1931.	1881-1931.
Bengal	82,955	51,087,338	616	+7·5	+7·7	+8·0	+2·8	+7·3	+38·0
British Districts ..	77,521	50,114,002	646	+7·6	+7·8	+7·9	+2·7	+7·3	+38·0
Cooch Behar State	1,318	590,886	448	—3·9	—2·1	+4·6	—0·1	—0·3	—1·9
Tripura State ..	4,116	382,450	93	+43·7	+26·1	+32·5	+32·6	+25·6	+299·9
Sikkim	2,818	109,808	39	..	+93·8	+49·0	—7·1	+34·4*	+260·5

* 1891—1931.

In an interesting examination of the population question printed as an appendix to this chapter the Census Superintendent reaches the conclusion that Bengal might have a population of some 53 millions in 1941, and that the maximum population will be from 68 to 74 millions; that the Hindu population has passed the point at which the rate of increase accelerates in successive decades and is approaching a stationary population, whereas the Muslim population has not yet progressed so far along its present cycle of growth but will ultimately be to the Hindu as 4 to 3; and that Bengal could support at the present standard of living nearly double its present population.

Bihar and Orissa.

14. Bihar and Orissa has a heterogeneous population of 42,329,583 in an area of 111,702 sq. miles giving a mean density of 379 per sq. mile, of which 28,648 sq. miles consist of feudatory States which contain more than 4½ millions of the population. The increase of the province has been 11·5 per cent. since 1921. The population falls naturally into three areas which do not correspond to its administrative divisions, that is into Bihar (exclusive of the Santal Parganas), the Chota Nagpur plateau together with the Santal Parganas and the Feudatory States, and Orissa proper. The mean density gives little indication of its great variation, which is as high as 969 persons per sq. mile in the Muzaffarpur district of Bihar, with a density of 1,073 if calculated on cultivatable area, and as low as 43 in the Feudatory State of Rairakhol. In previous decades the number of emigrants has very greatly exceeded the number of immigrants. This excess has been considerably reduced during the past ten years.

Locality.	Area in sq. miles.	Population.	Density.	Variation of the population per cent.					
				1881-91.	1891-01.	1901-11.	1911-21.	1921-31.	1881-1931.
Bihar and Orissa	111,702	42,329,583	379	+7·5	+1·8	+5·1	—1·2	+11·5	+26·8
Bihar .. (*excluding Santal Parganas*).	36,877	23,676,028	642	+4·7	—1·3	+1·5	—1·3	+ 9·7	+13·6
Orissa .. (*ex. Angul and Sambalpur*)	8,201	4,202,461	512	+6·8	+7·1	+0·9	—4·6	+5·2	+15·8
Chota Nagpur with Santal Parganas, Angul and Sambalpur ..	37,976	9,799,087	258	+10·2	+5·2	+11·8	—0·1	+16·4	+50·6
Feudatory States	28,648	4,652,007	162	+25·6	+9·5	+19·0	+0·4	+17·5	+93·0

But these conditions have been confined to British territory, for in the States there has been in the past an excess of immigrants over emigrants which has been similarly reduced during the past decade. The public health has been exceptionally good throughout the decade, mortality from plague having decreased by about 73 per cent. and from cholera by about 30 per cent. At the same time, though the birth rate has fallen from 41 per mille to 36·5, the survival rate has more than doubled. Earners profited by a general decline in the cost of living, while cultivators also benefited during the greater part of the decade not only by a succession of good harvests but by the fact that the prices of food grains retained a high level after other prices had fallen. There have been heavy investments in post office 5-year cash certificates; in the Post Office Savings Bank the number of depositors has risen since 1921 by 27·8 per cent. and the value of the deposits by 102 per cent. The standard of comfort has everywhere risen among the labouring classes, while an outstanding change in diet is the development of tea-drinking. It has already been pointed out that the population of this province is heterogeneous. That of Bihar is not markedly dissimilar to the population of the east of the United Provinces on the one hand or the west of Bengal on the other, between the populations of which it forms a natural link, and may be regarded as normal Hindustani speaking population of the Ganges valley. In Orissa proper the population is more nearly allied to that of Lower Bengal, but has a distinctive culture of its own. The Chota Nagpur Plateau and the Santal Parganas are primarily the habitat of comparatively primitive Munda speaking tribes and of others speaking Dravidian languages but closely allied to them in race. Sambalpur and Angul are not dissimilar and the inhabitants of the Feudatory States are also of the same kind, though Oriya replaces Hindi on the southern slopes of the plateau as the medium of communication with the more civilised world.

Bombay.

15. Bombay in 1921 included the area which in 1931 was enumerated as the Western India States Agency, and on this occasion therefore its area was reduced to 151,593 square miles (excluding Aden), having a population of 26,347,519 and a mean density of 174. Even with this reduction Bombay remains larger than any province except Burma and Madras. It comprises not only the British districts of the Bombay Presidency proper, but the Bombay States and Agencies and Sind. Aden is separately treated in an individual volume (Vol. VIII, pt. 3), and includes the whole of the Aden Settlement and Perim, but not the Aden Protectorate. An entirely separate volume (IX) deals with the cities of the Bombay Presidency, which is far ahead of any other province in India in the proportion of its urban to rural population, if we exclude Delhi and Ajmer-Merwara, where the principal unit of the province is itself a town.

Locality.	Area in miles.	Population.	Density.	Variation of the population per cent.					
				1881-91.	1891-01.	1901-11.	1911-21.	1921-31.	1881-1931.
Bombay Province	151,673	26,398,997	174	+15·02	—3·6	+6·2	—1·2	+13·7	+32·0
Sind	46,378	3,887,070	84	+19·0	+11·7	+9·4	—6·7	+18·5	+60·8
Presidency ..	77,221	17,992,053	233	+13·7	—4·2	+5·3	—0·8	+12·4	+27·9
Bombay city ..	*24*	*1,161,383*	*48,391*	*+6·3*	*—5·6*	*+26·2*	*+20·1*	*—1·2*	*+50·2*
Bombay States ..	27,994	4,468,396	160	+17·6	—12·0	+7·0	+0·1	+15·5	+28·2
Aden	80	51,478	643	+26·4	—0·2	+5·0	+22·4	—8·9	+47·7

In Bombay City itself the population has actually fallen since 1921, partly probably because the economic depression which had set in by the census of 1931 had driven back to their homes the countrymen who normally come down to Bombay to work during the cold weather and partly no doubt owing to suburban expansion, but every other unit in the confines of the Presidency proper has increased in population during the decade and the general rate of increase, 13·7 per cent., is well above that of India as a whole. In the case of the cities the increase was probably greater than that actually shown, since the municipal authorities did not in all cases co-operate whole-heartedly, while some were definitely obstructive. In Surat, Kaira, Villeparle and Broach at any rate the enumeration was probably defective, and at Ahmadabad it was made impossible to carry it out at all in many parts of the city. For that town therefore an estimate has been made of the numbers not enumerated and added to the actual returns for the purposes of all tables in which details by religion, age, etc., are not required. Aden alone has fallen while the Bombay States and, even more, Sind have increased at a higher rate than the province as a whole, though Sind has been visited by disastrous floods and in 1929-30 revenue to the extent of Rs. 57,71,940 had to be remitted on account of damage by locusts. In marked contrast to all the decades since 1891 no district has suffered from a single very bad season during the whole period under review. Five seasons of the ten were good and five were moderate, and the fact that the prices of food grains fell more slowly than most others while cotton remained exceptionally high was of great benefit to the cultivator. At the same time wages and the demand for labour showed a tendency to rise rather than to fall until 1930, and then did not fall proportionately to the drop in prices. In the towns the decade was also one of prosperity until 1927-28, and in the earlier half of the decade urban labour seems to have reached an unprecedented standard of comfort, but at the end of the period the trade depression, aggravated by the civil disobedience movement, caused much unemployment and discomfort.

Burma.

16. The census of Burma was taken on February 24th two days earlier than that of India proper on account of local festivals which made the 26th an inconvenient date. Though only eighth in order of population figures, Burma is by far the largest of the provinces of the Indian Empire, having an area of 261,610 square miles, of which 233,492 were covered by the census operations of 1931. The

population censused is 14,667,146, having increased by 11 per cent. since 1921, part of which increase, as near as can be estimated 320,000* persons, is due to immigration from India. The figures in the marginal table give the variation by "natural" divisions, but these divisions are administrative and racial rather than geographical. Thus the Burman Division represents the plains districts of administered Burma in which the population is primarily (94 per cent.) Burmese, though it includes the remnants of the Mons of Pegu, the main bulk of the Karens, who appear also in the Salween and Shan divisions in smaller numbers, and a considerable share of the total number of Chins, Kachins and other indigenous races. It contains nearly all the Chinese other than Yunnanese, that is to say almost two-thirds of the total, and practically all the other foreign or Indo-Burmese population. The Chin division contains for practical purposes Chins and no one else. The Salween division, consisting as it does primarily of the Karenni, the only area in Burma with the status of an Indian State, has a population purely Karen and Tai. The Shan division, constituted by the Northern and Southern Shan States, is of course primarily Tai, but includes a good many Karens and Burmans, almost all the Yunnanese (who make up more than a third of the total Chinese in Burma), almost the whole of the Palaung-Wa branch of the Mon-Khmer race, many Kachins, about half the other indigenous races of Burma, and a few Indians. The immigration of Yunnanese during the decade has been considerable and has added about 10,000 to the population of the Northern Shan States, while Indians, largely Gurkhas from Nepal, have added another 11,000 to the Northern and 5,000 to the Southern Shan States. In the Salween division the population of the Karenni States decreased, and the increase in the rest of that division was largely due to the mines in Salween District. The Chin division has increased not only by the natural growth during a prosperous decade but by the inclusion of previously unadministered country on the Assam border. As far as climatic conditions went the decade was normal and floods and droughts were confined to small areas and involved no widespread calamities comparable with those which befell some parts of India, though the town of Pegu was destroyed by a disastrous earthquake which did damage elsewhere as well. Burma grows more rice than her population consumes, and although cultivable land is not readily capable of extension the area under irrigation was extended by some 317,000 acres during the decade. Industrial expansion, particularly in the production of oil, has been important in some districts and railways have extended by 434 miles. There has been some increase in mining activity in spite of the slump in silver and baser metals. The fall in the price of paddy was perhaps the most serious feature of the decade economically. The marginal table shows the wholesale prices of paddy brought by boat to Rangoon annually from January to March. After a very considerable rise from the 1921 prices, the price fell in 1929 nearly to the 1921 level, in 1930 considerably below it and in 1931 dropped to half. The past decade witnessed a very rapid growth of national feeling in Burma. This feeling tended to take a racial bias and showed itself particularly strong against Indians and Chinese, manifesting itself against the former in the Rangoon riots of May 1930, and against the latter in a riot in January 1931. With these came the rebellion, of which the Burma General Administrative Report for 1930-31 writes :—

Locality.	Area in square miles.	Population.	Density.	Variation of population per cent. 1891-1901.	1901-1911.	1911-1921.	1921-1931.	1891-1931.
Burma ..	**233,492**	**14,667,146**	**63**	**+35·9**	**+15·5**	**+9·1**	**+11·0**	**+89·9**
Burman	156,297	12,856,207	82	+19·5	+14·6	+9·7	+11·7	+67·8
Chin ..	12,278	192,655	16	..	+38·9	—4·9	+20·6	+59·2*
Salween	7,101	111,947	16	..	+31·9	+3·5	—0·8	+35·5*
Shan ..	57,816	1,506,337	26	..	+18·7	+6·3	+5·1	+32·6*

* 1901—1931.

Year.	Price in rupees per 100 baskets (46 lbs.)
1921	152
1922	185
1923	178
1924	193
1925	178
1926	185
1927	181
1928	169
1929	159
1930	138
1931	77

"The outbreak of a sudden and prolonged rebellion came as a surprise. It began on 22nd December 1930 in Tharrawaddy (75 miles north of Rangoon), a turbulent district

* *Vide* Chapter I of Burma Census Report, 1931, paragraph 14.

since Burmese times and in these latter years a favourite resort of political agitators. Military Police were despatched in twenty-four hours, and regular troops followed, but by May 1931 there had been outbreaks in Prome, Yamethin, Pyapon, Henzada, Thayetmyo and attempted outbreaks elsewhere. The rebels were tatooed in order to render them invulnerable, and many wore simple uniform, for the rising was organised. Its object was the overthrow of Government and the enthronement of a jungle king, for in its prime origin it had little to do either with modern politics or with economic stress. It was aggravated by, just as in its turn it proceeded to aggravate, economic stress, but it originated in an outburst of mediæval superstition of a recurrent and recognisable type."

The outbreak coincided, of course, with the census, but luckily the preliminary enumeration could everywhere be completed in undisturbed conditions except in Tharrawaddy District and a small part of Pegu, where there was inevitably some under-enumeration. The rebellion spread to Henzada before the final enumeration, but the preliminary enumeration had already been completed.

Central Provinces.

17. The Central Provinces and Berar, an area totalling 131,095 square miles, include not only the British districts, 82,153 sq. miles, and the fifteen States of the Central Provinces, 31,175 square miles, but the four districts of Berar, 17,767, which are leased in perpetuity from H. E. H. the Nizam. The total area of the province according to the latest revision is 133,050 sq. miles, but this figure was obtained too late for use in the tables. The total population is 17,990,937 with a mean density of 137 per sq. mile, but this density is very variable being exceedingly low in the 20,000 sq. miles still covered by forest. The highest density is that of the Katghora Tahsil which has 492 persons to the sq. mile, and the lowest that of the Ahiri Zamindari with only 16. Famines and epidemics have been responsible for exceptional fluctuations in the past, and the Central Provinces more than any other are marked by recurring alternations between good and bad years. The decade under review opened in conditions of scarcity and high prices, while the effect of the influenza epidemic upon women of the child-bearing ages can be traced in certain age groups at the present census. Up to the end of 1921 public health was bad. Cholera, plague and malaria caused exceptional mortality. In 1922 however the satisfactory monsoons of that and the previous year reduced the death rate from 44 to 29, though the birth-rate also fell from 38 to 36 per 1,000. Good monsoons and healthy years continued until 1926-27, which was marked by serious floods, and 1927-28 saw the beginning of the decline in prosperity. Wheat was attacked by rust and more than half of the crop was lost in the northern districts of the province in that year and health deteriorated. The following year brought the recurrence of non-co-operation, agrarian agitation and general depression, another unsatisfactory agricultural year in the north of the province, and much unhealthiness from cholera, plague, small-pox, influenza and malaria. On the whole, however, the intervening prosperity more than balanced the depression at either end of the decade. The net area cropped increased from 23,585,215 acres to 25,364,376 ; the addition of a thousand miles of irrigation channels added nearly a hundred thousand acres of irrigated land ; a thousand miles of metalled road were added to the existing metalled roads, and many new bridges, and 300 miles of railway. It is significant of the connection between prosperity and population that the growth of the latter was very small in the north of the province which suffered three very bad years at the end of the decade. Elsewhere, as in other provinces, the highest rate of increase was in the most thinly populated areas. The infant mortality rate appears to be higher in the Central Provinces than in India as a whole or in most other parts of India, but the rate of increase at this census has been 12·6% for the province. Both the natural features and the population are very varied. The Narbada valley in the north is a wheat growing tract; the Maratha plain in the west and the Chhattisgarh plain in the east

Locality.	Area in sq. miles.	Population.	Density per sq. mile.	Variation of population per cent.					
				1881 to 1891.	1891 to 1901.	1901 to 1911.	1911 to 1921.	1921 to 1931.	1881 to 1931.
Central Provinces and Berar ..	131,095	17,990,937	137	+10·7	—7·0	+17·9	—0·3	+12·6	+35·0
British districts	82,153	12,065,885	147	+9·5	—9.2	+17·8	—0·2	+11·3	+30·2
Berar ..	17,767	3,441,838	194	+8·4	—5·0	+11·0	+0·6	+11·9	+28·8
Central Provinces States.	31,175	2,483,214	80	+23·4	—4·8	+29·8	—2·4	+20·1	+79·0

are rice-growing areas ; the Central plateau and the Chota Nagpur plateau in the north-east like the States of Bastar and Kanker and the district of Chanda in the south are largely forest. In the open country Marathi is the language of the west and Hindi of the east, but the forest tribes speak Dravidian or Munda languages. In Bastar State, the remotest part of the province, there has been much increase in communication, but the Administrator reports that the increase in traffic is leading to an increase in the consumption of opium and in the case of one tahsil to the substitution for opium of the much more pernicious mercury.

Coorg.

18. Coorg, smallest after Delhi of the provinces of India, is the only one which showed a decrease of population at the census of 1931. It is administered by a Chief Commissioner, who combines this office with that of Resident in Mysore, and has a council of 15 elected and 5 nominated members. Its area is 1,593 square miles (of which 519 are occupied by Reserved Forest) with a population of 163,327—511 less that is than in 1921, and a density of 103 persons per sq. mile. The decrease in population is probably greater than the figures indicate, since there has been a decrease of about 5,000 persons in the natural population most of which is balanced by an increase in immigrants more apparent than real, since it consists mostly of labourers who leave the province for their homes in March. In 1921 many must have already gone when the census was taken but in 1931 the census fell earlier before the exodus had started. The vital statistics showed an excess in deaths over births of 14,000, though it is stated of the average individual in Coorg that his desire " appears to be to have as many children as possible, irrespective of his economic position ". Coffee plantations on an important scale as well as cardamom plantations on the western slopes of the plateau continued to flourish and tea to survive, though plantations of rubber and agave are being abandoned, but the staple crop is rice of which the province produces more than it consumes. Both for rice and coffee the decade was favourable except for the heavy floods in 1924. The fall in prices, steady till 1929, at the end of the decade caused paddy to be sold at exceedingly low rates and the area under rice-cultivation to decrease from 84,587 to 82,822 acres. Urban population has increased and a general increase in the number of occupied houses points to the gradual dissolution of the joint family system prevalent in Coorg.

	Area in Sq. miles.	Population.	Density.	Variation of the population per cent.					
				1881-91.	1891-01.	1901-11.	1911-21.	1921-31.	1881-1931.
Coorg. ..	1,593	163,327	103	—2·9	+4·4	—3·1	—6·4	—0·3	—8·4

Delhi.

19. Delhi is the smallest and most recently constituted of the provinces of India. It came into being as a province on the laying of the foundation stone of New Delhi by His Majesty the King Emperor in December 1911, and as a result of the establishment there of the imperial capital its growth has been phenomenal. It is of course primarily an urban unit and the total area of the province is only 573 sq. miles, but the population is 636,246 persons (722 females per 1,000 males) with a mean density of 1,110 persons per sq. mile. This density varies from 58,273 persons per sq. mile in Old Delhi municipality to 372 in the rural area, where the increase during the decade has been only 3 per cent. as compared with 30·3 per cent. for the province as a whole. This rapid increase is due to the abnormal growth of a newly established capital, and is very largely due to immigration, since the gross balance of migration in Delhi's favour is 189,594 persons, of which the Census Superintendent regards 111,775 as the actual net increase by migration during the decade since 1921. This growth in population has outstripped the rapid building of houses and in the urban area the density per 100 houses has increased from 410 in 1921 to 454 in 1931. The censused population of the urban areas

Locality.	Area in sq. miles.	Population.	Density.	Variation of population per cent.					
				1881 to 1891.	1891 to 1901.	1901 to 1911.	1911 to 1921.	1921 to 1931.	1881 to 1931.
DELHI PROVINCE ..	573·0	636,246	1,110	+6	+9	+2	+18	+30	+81
Urban	65·5	447,442	6,835	+11	+1	+12	+31	+47	+158
Old Delhi Municipality.	*5·96*	*347,539*	*58,273*	*+11*	*+9*	*+11*	*+8*	*+40*	*+104*
New Delhi ..	*48·3*	*73,653*	*1,524*	..	..	..	..	*+95*	..
Rural	507·5	188,804	372	+2	+9	—8·	+2	+3	+6

however (447,442) probably falls to about 330,000 in the hot weather, which is likely to be no more and possibly even less than its permanent population at the height of its importance in the reign of Shahjahan.

Madras. 20. Madras covering 142,277 sq. miles populated by 46,740,107 persons, is second among the major provinces in area, third in population and fifth in density (329), but in rate of increase seventh exceeding only Bengal and the United Provinces the higher population figure of which it is fast overhauling. Its rate of increase for the decade was 10·4 in British territory, a little less than the general rate of the whole Indian Empire. The total irrigated area has increased by some 66,000 acres, that is by 0·90 per cent. only, but important new works are projected. The decrease in the value of the crops raised has been nearly 46 per cent. which indicates not a fall in the quantity of the crop but in the level of prices. At the same time possibilities of agriculture on present methods have more or less reached a maximum and the Presidency can no longer feed itself. The decade was healthy, and not only has it been free from epidemics but the skilled research of Colonel Russell, the Director of Public Health, has made it possible to cope with epidemics when they arise, and in the case of cholera to predict their occurrence and so to forestall their virulence. Cholera, which is endemic in the south of the Presidency, has proved to have a six-year cycle. The vital statistics of Madras are worthy of reference since this province is the only one whose registration of birth and death approaches anything like a satisfactory standard. Even so in 1930 some 62,000 unregistered births and 20,000 unregistered deaths were detected by inspecting officers in the Presidency. In some parts of Madras emigration takes place on a larger scale to Assam, Burma, Ceylon and Malaya, the annual loss being some 13,000, and though the decline in the planting industry has resulted in large numbers of returns, these had not had their full effect by the time the census took place, even from Burma. As in the accuracy of her vital statistics, Madras is ahead of other provinces in the matter of birth control. A tendency is observed by the Census Superintendent for men at any rate to marry later, and contraceptive methods are advocated by influential persons and widely advertised in the press. The Census Superintendent writes " Ten years should show a marked growth in their popularity. Books on the subject are to be found in any bookstall or publisher's list and whether they are read as mild pornography or for serious guidance it is unlikely that they can fail to exert some influence ". He adds, as a portent, that contraception of a crude kind has been observed among the Goundans of Salem to prevent large families, the fragmentation of holdings and the weakening of the joint family system.

The external boundaries have not altered. Internally there have been some changes between districts the most important of which has been the re-absorption in the three neighbouring plains districts of the Agency Division, a hilly tract inhabited by Khonds, Sawaras, and similar hill tribes and quite alien to the plains

Province and Natural Divisions.	Area in sq. miles.	Population.	Density.	Variation of the population per cent. 1891-01.	1901-11.	1911-21.	1921-31.	1891-1931.
Madras	**142,277**	**46,740,107**	**329**	**+7·2**	**+8·3**	**+2·2**	**+10·4**	**+31·1**
Agency	19,869	1,763,765	89	+2·4	+16·7	—4·0	+16·5	+33·6
East Coast North	31,532	12,175 530	386	+8·8	+9·8	+3·2	+12·2	+38·5
East Coast Central	32,020	13,349,980	417	+8·9	+7·9	+3·0	+11·3	+34·7
East Coast South*	22,102	10,380,774	470	+5·6	+8·4	+3·0	+5·2	+24·0
West Coast	10,798	5,082,281	471	+6·3	+7·1	+3·3	+13·5	+33·5
Deccan*	25,954	3,994,543	154	+5·5	+3·5	—3·7	+10·3	+16·0

* Excluding States.

districts which have absorbed it. The mean density is 329 but density varies greatly in different areas being only 89 persons to the square mile in the agency tracts and 471 on the west coast, though one district, the plains of Godavari East, on the Coromandel Coast reaches a higher density (660) than Malabar itself with 610. There is a greater tendency to city life in Madras than in any major province but Bombay, but the towns are far less industrial in character than that of the latter province. Nevertheless signs of industrial development are appearing and cotton mills are springing up at small country centres supplied by the cotton growing areas they adjoin. Thus Pollachi, a small town in Coimbatore district, had six mills in 1921 but thirty in 1931. Cheap power from water is a possibility and the use of electricity is steadily advancing in popularity, as the

decade has seen many towns with oil lamps or no lamps adopt electric lighting and fans. The standard of living is rising and in ten years the villager has "become accustomed to and takes as necessities what formerly were rather unlooked-for luxuries. The great advance in communications which the motor bus and car has brought has contributed enormously to widening horizons".

North-West Frontier Province.

21. The North-West Frontier Province has an area of 36,356 square miles with a population of 4,684,364 and a mean density of 129 per square mile, but of this area 22,838 square miles constitute the Trans-frontier Agencies, of the population of which 2,212,837 is only estimated and not obtained by enumeration, making a total with those enumerated in trans-frontier posts of 2,259,288 (density 99) and leaving 2,425,076 persons in the five regularly administered districts with an area of 13,518 square miles and a mean density of 179, an area a little greater than that of Holland with a population a little less than that of Denmark. Since 1921 the Malandri tract, 20 square miles, has been added to the administered from the unadministered area and 4 square miles have been transferred from Kohat District to the former. Otherwise there has been no territorial change. The density of population in the administered areas exclusive of urban population varies according to the combined factor of rainfall × irrigable land, decreasing from north to south. The growth of population has depended mainly on the extension of canal irrigation. The Kabul River Canal reached its maximum area of irrigation in 1921 and the Upper Swat Canal in 1929. When the decade opened the agricultural position was bad and the frontier was disturbed, a condition which, however, benefits the inhabitants of the administered districts financially. Both contractors and unskilled labour do well and "to the Pathan of fighting age times of unrest call up memories of a princely pay earned in princely idleness, guarding with a government rifle and the prestige of his race some lonely spot on a winding frontier road". The situation on the frontier improved rapidly, but this improvement was followed by outbreaks of internal disturbance in 1924 and 1927 of a communal nature and in 1929 by revolutionary outbreaks all over the province culminating in the very serious riots of April 1930 in Peshawar with inevitable repercussions among the border tribes, though the situation was restored in time for the census to be taken generally under normal conditions. Agriculturally the decade was satisfactory until 1924, less satisfactory from 1924 to 1928 but improved from 1928 to 1930 when a deficient fall of rain and an excessive fall in prices combined to reduce greatly the area sown for crops. Rs. 22,06,956 of revenue were remitted on account of damage by locusts in the years 1929-30. Public health was bad in the first half of the decade, which the Census Superintendent attributes to the after effects of the influenza epidemic, but the second half was one of "uninterrupted good health" which "restored to the people their normal vitality", and the increase of population in the administered districts since 1921 has been 7·7%. The Co-operative Credit movement was started in 1925, and in 1926 there were 16 societies with a membership of 365 and a working capital of Rs. 39,317. In 1930 there were 166 societies with 5,825 members and a working capital of Rs. 8,92,000. The primary necessity of the province is a settled economic outlook without which an increase in population disproportionate to that in wealth and productive efficiency will involve poverty and discontent and in all probability a destructive agitation and very serious disturbance.

Locality.	Area in sq. miles.	Population.	Density.	Variation of population per cent. 1881 to 1891.	1891 to 1901.	1901 to 1911.	1911 to 1921.	1921 to 1931.	1901 to 1931.
N. W. F. P.	36,356	4,684,364	129	..	..	+79·7	+32·9	—7·7	+120·4
Administered areas.	13,518	2,425,076	179	+17·9	+9·9	+7·6	+2·5	+7·7	+18·8
Agencies and Tribal areas	22,838	2,259,288	99	..	..	+1,831·9	+74·2	—20·0	+2,590·8

Punjab.

22. The Punjab is the eighth province in India in area, but with the Punjab States Agency fourth in area, sixth in density and fifth in population. It has an area of 136,964 square miles with a mean density of 208, but this includes not only British districts and the Punjab States but also the Punjab States Agency, a separate unit though treated in the same volume. Taken separately British territory has a population of 23,580,852 with a density of 238 over 99,265 square miles. The area appears in the tables as 99,200 the revised figure having been received too late for

incorporation, a condition which also explains the appearance of the area 5,820 in Table I as that of the Punjab States instead of the revised area 5,292 square miles with a population of 437,787 and a density of 83. The Punjab States Agency has an area of 32,407 square miles, a population of 4,472,218 and a mean density of 138. The increase in the Punjab population during the last 40 years is well illustrated by the density of Lyallpur district which was 15 per square mile in 1891 and is now 368. The last decade has seen the highest rate of increase yet recorded. It has been a healthy decade, the first half in particular, though in the second half there were plague epidemics in 1924 and 1926, while in 1926 and 1928 there were localized epidemics of cholera. The birth rate, twice that of the United Kingdom, has remained consistently high. Agriculturally the decade has been prosperous. The Sutlej canal system in 1921 fed the Sirhind Canal only; it now irrigates large tracts in Multan, Lahore, Ferozepore and Montgomery districts and in Bahawalpur State, as well as in Bikaner in Rajputana. In the Punjab as a whole canal irrigation has extended by over 19 per cent. and has added 2,000,000 acres of irrigated land during the decade, though a drawback to irrigation has appeared in the tendency towards the rise of the subsoil water level, which forces up from below salts which make the surface soil unfit for cultivation. Agricultural wages remained high until 1928 and have not fallen so rapidly as prices. Agricultural credit has increased its capital from 216·13 lakhs in 1921 to 817·91 in 1931 and its owned capital from 113 to 317 lakhs, and an indication of agricultural prosperity is to be found in the rise by 22 per cent. in the price of agricultural land. There has been a spread of improved varieties of wheat, cotton and sugar-cane and a great advance in the local manufacture of cane mills, ploughs, irrigation wheels and other agricultural implements. In 1921 the Census Superintendent remarked on the noticeable absence of any local manufacture of agricultural implements, but now at Batala, in Gurdaspur, alone there are 21 iron-foundries with an annual output of over 19,000 implements valued at Rs. 537,000. The comparative prosperity and high prices of the earlier part of the decade led to increased interest and activity in the formation of joint stock companies, and factories increased from 297 with 42,428 hands to 526 with 49,549 hands. The extraction of petroleum and the manufacture of cement from limestone have been started in Attock district within the decade, while the Mandi hydro-electric scheme now just completed is likely to hasten the industrialization of the province by the plentiful supply of cheap power. It remains to mention the rural uplift movement started in Gurgaon district in 1931 by Mr. Brayne and taken up elsewhere by the Y. M. C. A. which has also opened in Lahore a broadcasting station which already transmits to 1,500 receivers.

Locality.	Area in sq. miles.	Population.	Density.	Variation in population per cent. 1881 to 1891.	1891 to 1901.	1901 to 1911.	1911 to 1921.	1921 to 1931.	1881 to 1931.
Punjab	136,964	28,490,857	208	+10·2	+6·3	—2·4	+5·5	+13·5	+37·0
British Punjab ..	99,265	23,580,852	238	+10·1	+6·9	—1·8	+5·7	+14·0	+39·2
Punjab States ..	5,292	437,787	83	+8·9	+4·9	+0·1	—1·0	+7·3	+21·5
Punjab States Agency	32,407	4,472,218	138	+10·6	+3·7	—5·3	+5·5	+11·6	+27·7

United Provinces of Agra and Oudh.

23. The United Provinces have an area of 112,191 sq. miles of which 5,943 constitute the States of Rampur, Tehri-Garhwal and Benares. The total area is less than that of 1921 by 53 sq. miles on account of 8 sq. miles transferred elsewhere and 45 reduced by fresh surveys. The province (British territory) is a little smaller than the British Isles and has a slightly larger population, while the total population of the province is 49,614,833 with a mean density of 442. Though seventh of the provinces of India in size, it is third in point of population. Eighty per cent.

Locality.	Area in sq. miles.	Population.	Density.	Variation of population per cent. 1881-1891.	1891-1901.	1901-1911.	1911-1921.	1921-1931.	1881-1931.
United Provinces ..	112,191	49,614,833	442	+6·3	+1·7	—1·0	—3·1	+6·7	+10·6
British Territory ..	106,248	48,408,763	456	+6·2	+1·7	—1·1	—3·1	+6·7	+10·6
Agra	*82,094*	*35,613,784*	*434*	*+4·5*	*+1·9*	*—0·7*	*—3·0*	*+7·2*	*+10·0*
Oudh	*24,154*	*12,794,979*	*530*	*+11·1*	*+1·4*	*—2·1*	*—3·1*	*+5·2*	*+12·4*
U. P. States ..	5,943	1,206,070	203	+7·3	—1·4	+2·3	—4·6	+6·3	+9·7

of the earning inhabitants are actively engaged in agriculture. The decade has been a good one in respect of rainfall and crops, in spite of having opened with famine conditions in Gonda and Bahraich, and closing with drought and locusts in certain restricted areas, and with a serious collapse of agricultural prices. The Sarda irrigation canal, on which work was started in 1921, was opened in the main branch, in 1928. The system comprises some 4,000 miles of main channel and distributaries and 1,700 miles of drains over an area of six million acres of which it is anticipated that on an average 1,350,000 will be irrigated annually by its means. New masonry wells to the number of 150,314 have been constructed during the decade, mostly at the expense of the cultivators themselves, but the net cultivated area of the province has not increased and the double-cropped area is also stationary. The principal food crops are rice, millet, wheat, barley and pulse. Sugarcane is very important in the north-west and oilseeds are cultivated often in lines sown through fields of other crops. The condition of livestock during the greater part of the decade was unsatisfactory on account of epidemics. The enquiries made by the Banking Enquiry Committee in 1929 indicated that 46% of tenants and peasant proprietors were then debt-free, and 22% owed less than two years' rent. Of landlords a larger number were in debt and their debts were very much greater. The fragmentation of holdings is a serious disadvantage to the agriculturist, and the reserves built up during the first seven prosperous years of the decade have been exhausted by the collapse at its close. In 1929-31 revenue was remitted to the amount of Rs. 1,68,50,000, and about three times that amount in rents. In industry, of which Cawnpore is the principal centre, the numbers of factories rose by 72·5% from 218 to 376 and of persons employed in them by 33·2% from 69,000 to 92,000, and the increase has been principally in permanent as distinct from seasonal employment. There has been a marked improvement in public health, particularly in the matter of deaths from plague, cholera and small-pox. The increase in population during the decade has been greater in the States than in British territory but amounts over the whole province to 6·7%, the density being greater in the east than in the west. In this connection it is pointed out that the higher castes are predominant in the west of the province, and the lower in the east, or in cases of castes uniformly distributed, the western branches are socially superior. Generally speaking, however, the population of the United Provinces, like its language, is more uniform than that of most provinces in India.

Baroda.

24. Baroda State occupies 8,164 sq. miles in Gujarat and Kathiawar, but is not a compact whole, consisting, as it does, of four major and several minor disconnected areas, with a total population of 2,443,007 and a mean density of 299 per sq. mile. The population has increased by 14·9% since 1921. The natural increase is estimated at 9·4%, and the increase due to immigration was swollen by 26,755 persons who migrated from villages in adjoining British territory for political motives

Locality.	Area in sq. miles.	Population.	Density.	Variation of population per cent.					
				1881-1891.	1891-1901.	1901-1911.	1911-1921.	1921-1931.	1881-1931.
Baroda State	8,164	2,443,007	299	+10·7	—19·2	+4·1	+4·6	+14·9	+12·0

connected with the Non-co-operation movement. About the size of Württemberg both in area and in population, Baroda is the sixth largest of the Indian States though about sixteenth in area. No epidemics visited the State during the decade, nor were there any calamities claiming a serious toll of lives, but the State suffered severely from floods, frost, locusts and poor seasons and at the end of the decade from the heavy fall in prices. Nevertheless co-operative societies rose in number from 509 in 1921 to 1,047 in 1931, their membership from 16,932 to 37,321 and their capital from 26 to 75 lakhs of rupees. Occupied area increased from 3,780,000 acres to 3,920,000 and the number of permanent irrigation wells increased from 60,433 to 63,775. Medical relief continued to be expanded and child welfare and anti-malarial measures to occupy the State Sanitation Department.

The Central India Agency.

25. The Central India Agency deals with 61 Indian States situated roughly between Rajputana and the Central Provinces and occupying an area of 51,597 sq. miles including the British pargana of Manpur (54 sq. miles) and about 10 sq. miles of States territory under British administration. To them has been added for census purposes Khaniadhana State which is dealt with by the Gwalior Agency and has an area of 68 sq. miles. The total population dealt with is 6,615,120 in the Agency and 17,670 in Khaniadhana with a mean density of 129 per sq. mile. As a result of exchanges of territory with Rajputana and Gwalior there has been a net increase since 1921 of 66 sq. miles. The Agency is not a compact area but consists of "dissimilar tracts with different physical and geographical environment and complex ethnically, culturally and linguistically. Broadly speaking three areas may be recognised. They are Malwa, Bundelkhand and Baghelkhand". The States with which the Agency deals are described as "bewildering in variety as regards their area, population, income, degree of internal autonomy and their relationship with the paramount power". Some half dozen or more of these States are compact areas, but the great majority constitute "a medley of interlaced territories and the Agency itself is a mosaic of fragmented sovereignties". Malwa with its undulating plains and black soil and the fertile Narbada valley, although associated with the inhospitable Vindhya and Satpura hills, contrasts very markedly with the hilly, sandy and stony country of Bundelkhand and Baghelkhand. The west, that is the former, grows cotton, wheat and *jowar*, the latter, the eastern parts, grow rice and *kodon*. The former is a favoured region generally free from seasonal calamities, and the latter though with a higher average rainfall is more subject to drought and scarcity. The decade economically has been

Locality.	Area in sq. miles.	Population.	Density.	Variation of population per cent. 1881-91.	1891-1901.	1901-11.	1911-21.	1921-31.	1881-1931.
Central India Agency .. (*with Khaniadhana State*).	**51,597**	**6,632,790**	**129**	..	..	+12·9	—2·1	+10·5	+22·0*
Manpur Pargana ..	49	6,852	140	..	—8·5	+35·2	—30·9	+50·0	+28·3†
Ali-Rajpur	836	101,963	122	+23·3	—28·4	—44·4	+23·3	+14·0	+79·4
Barwani	1,178	141,110	120	+42·2	—5·1	+42·6	+10·7	+17·4	+150·0
Bhopal	6,902	729,955	106	—0·2	—29·5	+8·7	—6·2	+5·4	—24·4
Dewas, I	449	83,321	186	+11·4	—22·4	+18·5	+16·6	+8·2	+12·7
Dewas, II	419	70,513	168	+2·1	—20·1	+14·3	+5·3	+5·2	+3·4
Dhar	1,784	243,430	136	..	..	+12·0	+19·2	+5·9	+42·0*
Indore	9,518	1,318,237	138	+4·8	—20·8	+16·3	+9·4	+14·5	+21·0
Jhabua	1,336	145,522	109	+28·9	—32·3	+37·2	+11·4	+17·4	+56·6
Jaora	602	100,166	166	..	..	—1·4	+3·9	+16·7	+19·7*
Khilchipur	273	45,583	167	+0·5	—14·2	+28·7	—0·1	+13·8	+26·2
Narsinghgarh ..	734	113,873	155	+3·4	—20·8	+19·3	—7·7	+12·3	+1·3
Rajgarh	962	134,891	140	..	..	+34·1	—9·7	+17·6	+42·4*
Ratlam	693	107,321	155	+2·1	—4·8	—2·9	+3·6	+25·5	+22·9
Sailana	279	35,223	126	+6·0	—18·0	+10·7	—5·0	+29·7	+18·5
Sitamau	202	28,422	141	+8·0	—28·4	+11·0	+0·2	+7·0	—7·8
Other Malwa States ..	526	80,467	153	..	..	+31·1	+8·4	+10·9	+57·7*
Ajaigarh	802	85,895	107	+14·2	—15·9	+11·3	—2·6	+1·3	+5·5
Baoni	121	19,132	158	+8·1	+7·3	+1·7	—1·9	—3·1	+12·2
Bijawar	973	115,852	119	+8·9	—10·5	+13·3	—10·8	+3·7	+2·3
Charkhari	880	120,351	137	+0·1	—13·4	+6·9	—6·9	—2·5	—15·8
Chhatarpur	1,130	161,267	143	+7·5	—9·4	+5·4	—7·4	—3·2	—7·9
Datia	912	158,834	174	+2·1	—6·7	—11·1	—3·8	+6·8	—13·0
Orchha	2,080	314,661	151	+6·9	—3·4	+2·6	—13·7	+10·4	+1·0
Panna	2,596	212,130	82	+5·3	—19·4	+18·6	—13·7	+7·4	—6·7
Samthar	180	33,307	185	—4·9	—17·4	—4·7	+4·1	+0·3	—13·8
Other Bundelkhand States	407	67,586	166	+1·3	—11·0	+4·3	—2·0	—0·4	—8·1
Baraundha	218	16,071	74	+7·6	—15·4	+8·0	—6·3	+1·0	—7·0
Maihar	407	68,991	170	+8·1	—17·6	+14·5	—9·0	+3·7	—3·8
Nagod	501	74,589	149	+5·6	—25·3	+18·8	—8·6	+9·4	—6·3
Rewa	13,000	1,587,445	122	+15·6	—12·0	+14·2	—7·5	+13·3	+21·6
Other Baghelkhand States	580	92,160	159	+15·0	—14·5	+9·8	—6·6	+6·6	+7·4
Khaniadhana ..	68	17,670	260	+10·2	+4·4	+13·2	—5·0	+5·8	+30·9

* 1901—1931. † 1891—1931.

one of comparative prosperity, free from famine or serious scarcity in any large area and from any widespread epidemic. Malwa was short of rain in 1925 and 1929, Bundelkhand and Bagelkhand in 1928 and 1929. The increase in population for the whole agency since 1921 has been 10·5%, ninety-two per cent. of which increase is natural, only eight per cent. of it being due to the favourable balance of migration.

Gwalior.

26. Gwalior State, the dominion of the Scindia family, about the size of the Irish Free State, is the sixth largest of the Indian States in area and

fifth in population, having 3,523,070 inhabitants in an area of 26,367 sq. miles, a density of 134. Thirty-two square miles of area, the status of which is in dispute, have been excluded at this census and 16 square miles not before included have been added, but the total thus arrived at is probably not quite accurate and the latest survey estimate of the area of Gwalior State is 395 sq. miles less than the area here quoted, but the figure has not yet been verified by the State. The increase in population since 1921 has been 10·3% in spite of an adverse migration balance of about —15,000. The State is not a compact area but consists of one large block of contiguous parganas and a number of smaller outlying ones. The Census Commissioner for the State compares the population of India in general and Gwalior in particular to Penelope's web, alternately woven and unpicked; he regards the fluctuation at alternate decades as symptomatic of the normal growth of the population. He concludes that the comparative freedom of the decade from scarcity and epidemics has kept the mortality rate down to normal and that the population which survived the influenza epidemic of the previous decade had a superior biological equipment and a higher survival rate which have been responsible for the exceptional increase experienced.

	Area in sq. miles.	Population.	Density per square mile.	Variation of population per cent.					
				1881-91.	1891-1901.	1901-11.	1911-21.	1921-31.	1881-1931.
Gwalior State	26,367	3,523,070	134	+13·9	—12·7	+5·3	—1·3	+10·3	+14·0

Hyderabad.

27. His Exalted Highness the Nizam's Dominions, though a little less than Jammu and Kashmir in size, constitute by far the largest of the States in population, containing 14,436,148 persons with a mean density of 175 in an area of 82,698 sq. miles. North of the Godavari and its principal tributary the Manjra the country is rich and highly cultivated, principally in cotton and wheat, while in the south and east the country is more rugged and less fertile, the most valuable crop, at any rate in the east, being rice. The decade was on the whole a good one agriculturally. It opened, it is true, with famine but except for that first year the harvests were either good or moderate and the land under cultivation increased from 38 to 42 million acres. Co-operative Societies increased from 1,437 to 2,157 and their membership from 35,293 to 53,120 and their working capital from eighty-six and a half lakhs to nearly two crores of rupees. Cotton prices fell in 1926, but otherwise the agriculturist benefited by well maintained prices for most of his produce until 1930. The results are seen in the increase in natural population by 14·9%, though part of this may have been due to improved enumeration. In the last 50 years the population of the Marathwara division, the western part of the State, has increased by 28·0% while that of the Telingana, the eastern part, has increased by 69·4%. The north-western part of the State is Maratha by language and population, the south-western is Kanarese and these two areas compose the *Marathwara*; the eastern part of the State (*Telingana*) is Telugu by language and population; both are predominantly Hindu by religion.

Locality.	Area in sq. miles.	Population.	Density.	Variation of population per cent.					
				1881-91.	1891-1901.	1901-11.	1911-21.	1921-31.	1881-1931.
Hyderabad State ..	82,698	14,436,148	175	+17·2	—3·4	+20·0	—6·8	+15·8	+46·6
Marathwara	41,196	6,881,550	167	+17·0	—10·1	+16·6	—9·0	+14·5	+28·0
Telingana	41,502	7,554,598	182	+17·4	+4·6	+23·6	—4·6	+16·9	+69·4

Jammu and Kashmir.

28. Jammu and Kashmir State is in area the largest of the Indian States but only stands fourth in order of population. Much of the State's surface is occupied by arid desert at a very high elevation unable to sustain any but the scantiest population, and though the fertile valleys of the irrigable country support a high density of population they are too limited in comparison to balance the uninhabitable mountains. The total area is 84,516 sq. miles with a population of

3,646,243, giving a mean density of 43 per sq. mile. This density drops to 5 persons per sq. mile over three quarters of the State in the area of the the semi-Tibetan tracts

Locality.	Area in sq. miles.	Population.	Density.	Variation of population per cent. 1891 to 1901.	1901 to 1911.	1911 to 1921.	1921 to 1931.	1891 to 1931.
Jammu and Kashmir ..	84,516	3,646,243	43	+14·21	+8·7	+5·1	+9·8	+43·3
Jammu	12,401	1,788,441	144	+5·7	+5·4	+2·7	+9·0	+24·7
Kashmir	8,555	1,569,218	183	+21·9	+11·9	+8·6	+11·5	+65·3
Frontier Districts ..	63,560	288,584	5	+10·2	+14·2	+3·1	+5·6	+80·1

which include the vast deserts of Ladakh at a height of some 16,000 or 17,000 feet above sea level, and the stupendous peaks of the Pamirs and of the Hindu Kush and Karakoram ranges. On the other hand the density for the Jammu and Kashmir provinces by themselves works out at 160·2 persons per sq. mile, while throughout the State most districts carry over 1,000 to the sq. mile of cultivated area, and actually in Ladakh and Gilgit, in the inhospitable mountains, that is, 1,600 is found, the highest density of inhabitants to cultivated land except in the Srinagar District itself. During the decade 136 miles of additional canal have been constructed irrigating an additional area of some 47,000 acres, and great improvements have taken place in road communications. Co-operative societies have increased by about 1,900 and their members by 300 per cent. since 1923, and their working capital amounts to over 97 lakhs. Except for disastrous floods in 1928 the decade has been very prosperous agriculturally, and the volume of both exports and imports has increased by about 25 per cent., though the money value of the exports fell during the last three years of the decade to something below the 1921 value of exports only four-fifths of their present volume. The decennium was also exceptionally healthy. The increase in population over the State as a whole has been 9·8 per cent., increasing the density per sq. mile from 39 to 43. The population is predominantly Muslim, though Ladakh is inhabited by Tibetan Buddhists who keep down the population to a level which their barren mountains can support by a system of polyandry. The other inhabitants of the frontier districts are Muslim including the mongoloid Baltis and the Dards of Gilgit.

Madras States Agency.

29. The Madras States Agency includes five States in the south of India two of which, Cochin and Travancore, in the south-west corner, publish their own

State, etc.	Area in sq. miles.	Population.	Density.	Variation of population per cent. 1881 to 1891.	1891 to 1901.	1901 to 1911.	1911 to 1921.	1921 to 1931.	1881 to 1931.
Madras State Agency ..	10,698	6,754,484	631	+10·6	+13·2	+14·9	+13·5	+23·7	+101·9
Cochin State ..	1,480	1,205,016	814	+20·4	+12·3	+13·1	+6·6	+23·1	+100·7
Travancore ..	7,625	5,095,973	668	+6·5	+15·4	+16·2	+16·8	+27·2	+112·2
Other States ..	1,593	453,495	285	+22·3	+0·93	+9·6	+2·2	—4·6	+32·1

census reports in the India series. The other three, Pudukkottai, Banganapalle and Sandur, are dealt with in the Madras provincial report to which reference must be made for detailed treatment. Figures of the area and population of Pudukkottai, the largest of them, will be found in the supplements to Tables I and II in part (ii), and a separate report has been published by the State, a summary of which forms Appendix VI of Volume XIV (Madras) of this series.

Cochin has an area of 1,480 square miles and a population of 1,205,016 persons, (females exceeding males) showing, over that recorded in 1921, an increase of 23·1 per cent., which the Census Superintendent regards as representing a real increase of 19 per cent. The density is 814 to the square mile, but this is over the whole State, whereas more than a third is mountainous and the area includes the surface of the back waters, long stretches of salt water lagoon cut off from the sea by narrow tongues of land. In the mountainous forests of the Western Ghats the density is very low, as the inhabitants consist only of a few scattered jungle tribes and the forest officials, and if these areas be excluded from the forest taluks, the

density of which is 365 to 975 when they are included, the density rises to 1,126, while the density of the coastal taluks excluding the lagoons in a similar manner becomes 2,733, one village, covering an area of 3·8 sq. miles, having the incredible density of 4,090 persons to the sq. mile, for its inhabitants are not an urban population but a rural and agricultural one, the staple crops being coconut and rice, as in the case with most of the taluks of Cochin State.

Travancore is a much larger state than Cochin but otherwise closely resembles it in population and in physical features, though it has a drier strip of coast towards the south running down to Cape Comorin. Its area is 7,625 sq. miles and its population is 5,095,973 with a mean density of 668. Though third in order of population, at least sixteen States in India are larger in size. It falls into three clearly marked natural divisions, the coast, the low hills and the high forest-clad hills. The rainfall varies from 35 inches in the extreme south to nearly 300 in the high hills, but over by far the greater area of the State it varies, as in Cochin, from 100 to 180. The hills have been largely developed and planted with tea and cardamom plantations, but are still thinly inhabited compared to the plains. Except Cochin, Travancore is far more densely populated than any State in India, and is more densely populated than Bengal. In the low hills tapioca is cultivated as a staple food. The net area under cultivation increased by 9·5 per cent. only as compared to an increase of 27·2 per cent. in population between 1921 and 1931, but the food production of the State is inadequate to its needs and Burma rice is purchased with the proceeds of the sale of coconut products, pepper and cardamoms. Wages nearly doubled during the decade and Savings Bank deposits more than doubled. This prosperous position was however being very severely affected by the economic depression in 1931.

Mysore.

30. Mysore State, the centre and main area of the Kanarese speaking population of south India, after Hyderabad the most populous of all the States, and the largest in area after that State and Jammu and Kashmir, has an area of 29,326 square miles, and a population of 6,557,302, with a mean density of 224 persons per square mile. The increase of population since 1921 has been 9·7 per cent., though the increase of natural population alone has been 10·8. This increase has not been evenly distributed, as the State is divided into the Malnad, that is the area of the high hills in the west, where the density falls in one taluk to 66 and where the population is little more than constant, and the Maidan, which is the comparatively level land constituting the plateau which is the main bulk of the State, and in which the increase and density is greater than that of the State as a whole. The highest rural density reached is 457 per square mile in the Narsipur taluk. The State includes the large Civil and Military station of Bangalore which is under British administration. The area under cultivation has increased during

Locality.	Area in sq. miles.	Population.	Density.	Variation of population per cent. 1881-'91.	1891-1901.	1901-'11.	1911-'21.	1921-'31.	1881-1931.
Mysore State	**29,326**	**6,557,302**	**224**	**+18·1**	**+12·1**	**+4·8**	**+3·0**	**+9·7**	**+56·6**
Civil and Military Station, Bangalore.	14	134,113	9,934	+7·0	—10·5	+12·5	+18·0	+12·8	+43·4
Remainder of State ..	29,312	6,423,189	219	+18·3	+12·5	+4·7	+2·7	+9·6	+56·9

the decade by 11·5% while a number of important works has increased the area under irrigation by 25% since 1921. Various improvements in agriculture and cattle breeding are taking place, and the cinema is used for instruction. A Land Mortgage Bank has been established and an Agriculturists' Debt Relief Regulation has been passed by the Legislature. The number of cooperative societies has increased by 713 and their membership by 45,000, making a total membership of 137,615, and the deposits in the Government Savings Bank amounted in 1931 to nearly Rs. 17,000,000, having more than doubled during the decade. Public health was good on the whole throughout the decade, and though prices fell towards its close harvests were good and the cultivator did not suffer severely. The State is importing more cereals for food than it exports, the imports being more than half in husked rice, but it is estimated that some 500,000 more acres can still be brought under irrigation. Rice and *ragi* are the staple crops. Industries are being developed, but it is doubtful if they can be so developed as to keep pace with the needs of the population in periods of normal

increase, and the Census Superintendent for the State points out that tabus such as that on marital connection during lactation, or at any rate soon after confinement, which tend to keep down the birth rate, are no longer observed as they used to be, while children are suckled only five or six months instead of until able to consume ordinary food. Meanwhile the Mysore Government has instituted a Birth Control Clinic in the Maternity hospital at Bangalore.

Rajputana.

31. The Rajputana Agency comprises 19 States, 1 Chiefship and 1 Estate grouped together for the purpose of their political relations with the Government of India, which are conducted through the Agent to the Governor-General in Rajputana. It includes also a small area of 6 square miles which is leased from the Sirohi State and is therefore at present under British administration forming the Abu district. The total area of the Agency is 129,059 square miles with a total population of 11,225,712 and a mean density of 87 persons per square mile. That is to say, it is about the same size as Norway with 4 times the population, or considerably larger than the United Kingdom but with one quarter of its population. Density varies very greatly, being 5 only in Jaisalmer and 246 per square mile in Bharatpur State. In the dry western part of the Agency the rainfall is little over 10 inches, whereas in the eastern part it is three times as much. The conditions of the decade have been good and the population has increased by 14·2% since 1921 though this represents an increase of little more than one million on the 1881 figure and the 1931 total is actually less than that returned in 1891, though in that census a considerable number of Bhils were estimated instead of enumerated as in all cases on this occasion. The biggest increase is that of 41·9% in Bikaner State, mostly on account of irrigation and immigration. Bharatpur (—1·9%) is the only State which has actually suffered a loss of population since 1921. Throughout Rajputana there was a general absence of scarcity and epidemic disease throughout the decade and although the prices of grain ruled high the growth of population does not seem to have been adversely affected. The high prices were in some States dealt with by the prohibition of exports and in others by the imposition of a tax on imported food stuffs. Wages were high, particularly in the case of the industrial population.

State or Agency.	Area in sq. miles.	Population.	Density.	Variation of the population per cent. 1881-91.	1891-01.	1901-11.	1911-21.	1921-31.	1881-31.
Rajputana ..	129,059	11,225,712	87	+20·6	—20·5	+6·9	—6·5	+14·2	+9·3
Abu District ..	6	4,532	755	..	+32·2	+5·5	—16·0	+25·7	+47·3*
Alwar ..	3,158	749,751	237	+12·4	+7·9	—4·4	—11·4	+6·9	+9·8
Banswara ..	1,606	225,106	140	+39·2	—17·3	+11·0	+15·0	+18·3	+48·1
Bharatpur ..	1,978	486,954	246	—0·8	—2·1	—10·8	—11·2	—1·9	—24·6
Bikaner ..	23,317	936,218	40	+63·4	—29·7	+19·9	—5·9	+41·9	+83·9
Bundi ..	2,220	216,722	98	+16·1	—42·1	+27·7	—14·5	+15·9	—14·9
Dholpur ..	1,221	254,986	209	+12·1	—3·0	—2·9	—12·7	+10·8	+2·1
Dungarpur ..	1,447	227,544	157	+7·8	—39·5	+59·0	+18·9	+20·2	+48·4
Jaipur ..	15,579	2,631,775	169	+11·7	—5·9	—0·8	—11·3	+12·5	+4·1
Jaisalmer ..	16,062	76,255	5	+7·0	—36·6	+20·4	—23·4	+12·7	—29·5
Jhalawar ..	810	107,890	133	+0·5	—40·3	+6·8	—0·1	+12·2	—28·2
Karauli ..	1,242	140,525	113	+5·3	+0·1	—6·5	—8·8	+5·1	—5·5
Kishangarh ..	858	85,744	100	+11·4	—27·5	—4·2	—10·8	+10·3	—23·9
Kotah ..	5,684	685,804	121	+1·6	—24·2	+17·3	—1·4	+8·5	—3·0
Kushalgarh ..	340	35,564	105	..	+180·9	+35·6	+32·5	+22·0	+515·8
Lawa ..	19	2,790	147	+25·3	—20·5	—4·0	—11·8	+23·3	+4·0
Marwar ..	35,016	2,125,982	61	+43·8	—23·4	+6·3	—10·5	+15·4	+21·0
Mewar ..	12,694	1,566,910	123	+23·5	—44·8	+25·8	+6·7	+14·6	+4·9
Partabgarh ..	886	76,539	86	+10·6	—40·9	+20·5	+7·0	+14·1	—3·8
Shahpura ..	405	54,233	134	+23·0	—32·9	+11·1	+1·5	+12·7	+4·8
Sirohi ..	1,958	216,528	111	+33·5	—19·9	+22·8	+1·0	+16·0	+51·5
Tonk ..	2,553	317,360	124	+12·4	—28·1	+10·9	—5·0	+10·2	—6·1

* 1891—1931.

Western India States.

32. The Western India States Agency, about the size of Hungary with half the population, was constituted as a separate unit in 1924 before which its census returns were incorporated with those of Bombay, with which province its economic conditions have been comparable throughout the decade. Its area is 35,442 sq. miles and its population 3,999,250 with a mean

density of 113 per sq. mile. It includes the civil stations of Rajkot and Wadhwan under the administrative control of the Agent to the Governor-General and 202 States and estates, of which 85 have their own rights of jurisdiction, while the others are grouped in thanas each under a thanadar. Of the 85 jurisdictional States 17 are salute States varying greatly in size from Cutch with an area of 8,250 sq. miles to Jafarabad with only 53, while the smallest of the non-jurisdictional estates is only one-third of a square mile in area and has a population of less than 200. The rainfall comes late in the monsoon and varies from moderately good to scanty and deficient, and density therefore varies accordingly from 268 in Rajkot to 59 in the Banas Kantha Agency where it is a wonder " that so many persons can find a livelihood in so little favoured a terrain". On this occasion separate figures have been compiled for 43 units, but complete data for all details for fifty years has proved impossible to obtain and even for some sub-agency groups the changes could not be filled in back to 1881. In the whole Agency there are only 66 towns, 11 of which are in Bhavnagar State ; Bhavnagar itself and Jamnagar in Nawanagar are the only two towns of over 50,000 inhabitants and there are only ten others of over 20,000, is so that it is clear that the Agency, though essentially rural and agricultural, is less so than those of Central India and Rajputana ; and so much of its population is located in towns that its degree of urbanization is just about the same as that of Bombay Presidency.

State or Agency.	Area in sq. miles.	Population.	Density.	Variation of the population per cent. 1881-91.	1891-01.	1901-11.	1911-21.	1921-31.	1881-1931.
W. I. St. Agency	35,442	3,999,250	113	+15	—17	+7	+0·5	+13	+17
Bhavnagar ..	2,961	500,274	169	+17	—12	+7	—3	+17	+25
Cutch ..	8,250	514,307	62	+9	—13	+5	—6	+6	+0·4
Dhrangadhra ..	1,156	88,961	77	+4	—32	+12	+12	+0·6	—11
Dhrol.. ..	283	27,639	98	+21	—19	+11	—3	+17	+24
Gondal ..	1,024	205,846	201	+19	+1	—1	+3	+23	+52
Jafarabad ..	53	12,083	228	+32	—2	+2	—11	+10	+28
Junagadh ..	3,284	545,152	166	+25	—18	+10	+7	+17	+41
Limbdi ..	344	40,088	117	+12	—35	+8	+5	+13	—7
Morvi ..	870	113,023	130	+17	—17	+3	+1	+24	+26
Nawanagar ..	3,791	409,192	108	+20	—11	+4	—1	+19	+29
Palanpur ..	1,769	264,179	149	+17	—19	+2	+5	+12	+13
Palitana ..	300	62,150	207	+23	—13	+15	—5	+7	+26
Porbandar ..	636	115,673	182	+21	—4	+11	+11	+14	+62
Radhanpur ..	1,150	70,530	61	—0·1	—37	+7	+3	+4	—28
Rajkot ..	282	75,540	268	+7	—0·3	+2	+20	+24	+62
Wadhwan ..	236	42,602	181	—0·1	—18	+3	+6	+12	+0·2
Wankaner ..	417	44,259	106	+29	—30	+19	+13	+20	+45
Banas Kantha Agency ..	3,475	203,553	59	+8·4	—34	—16	+1	—2	—40·5
Eastern Kathiawar Agency	2,764	282,468	102	..	..	..	—2	+12	+10*
Western Kathiawar Agency	2,397	381,731	159	..	..	..	—4	+10	+6*

* 1911—1931.

Other States.

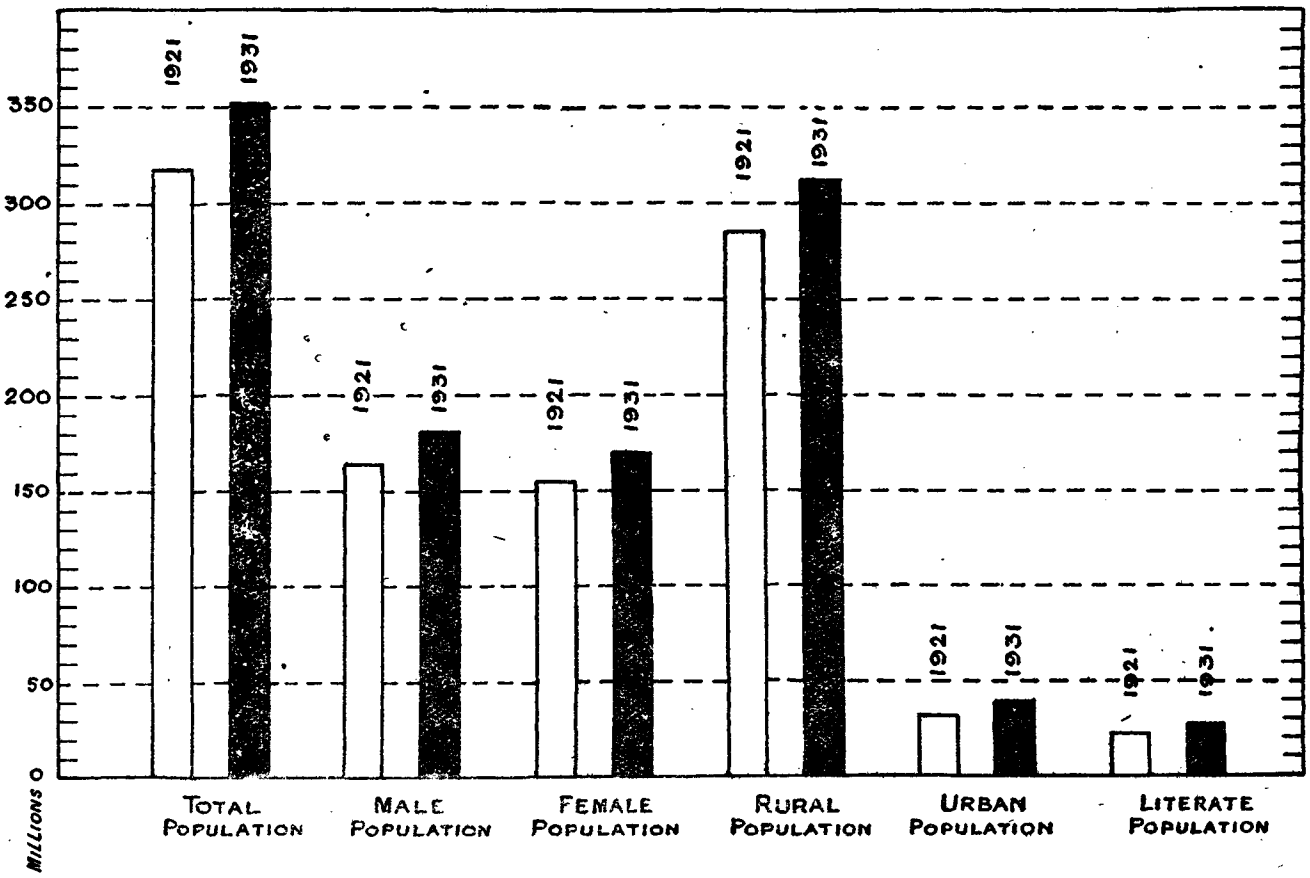
33. The Punjab States Agency and the States in political relation with Provincial Governments are treated with the provinces with which they are associated and Sikkim State with Bengal. Figures of the area and population of the larger States will be found in the supplements to Tables I and II in Part ii of this volume.

Section iv.—Population problem.

Nature of the problem.

34. Attention has already been drawn to the grave increase in the population of this country. The actual figure of the increase alone is little under thirty-four million, a figure approaching equality with that of the total population of France or Italy and appreciably greater than that of such important European powers as Poland and Spain. The population now even exceeds the latest estimate of the population of China, so that India now heads the list of all the countries in the world in the number of her inhabitants. This increase, however, is from most points of view a cause for alarm rather than for satisfaction. The total literate population of India in 1921 was 22,623,651 and is now 28,131,315, so that the mere increase of population during the intervening period has exceeded the former figure by 11 million, that is by 50 per cent., and still exceeds the latter by 20 per cent.

Even in Travancore State, where the percentage of literacy is much higher than in most parts of India, but where the population has increased by 27 per cent., the



proportion of literacy has fallen from 24·2 per cent. in 1921 to 23·9 per cent. in 1931 though in India as a whole it has risen from 7 per cent. to 8 per cent.

Recent writers on the population question in India, *e.g.*, Wattal and Ranadive, have directed their attention primarily to the question of food production. Their argument is that the population of India is already living permanently on the verge of scarcity and any increase is bound to result in an insufficiency of the food supply. Recent experience, however, throws doubt on this theory; the general slump in the price of food, and the difficulty found by cultivators in selling their produce, suggest that the danger of a shortage of the food supply is not the most serious aspect of the question. It is not argued that this is not a danger to be reckoned with, and in any case the maximum population possible is very far from identical with the maximum population desirable, since the rise of population on the subsistence margin must reduce the standard of living, but it would seem that the point has not yet been reached at which the ability of the country to feed its occupants is seriously taxed. The position of economists in regard to the west now appears to be that " the devastating torrent of babies " is being reduced to a trickle, and that even if it were swelled again the rapid developments both mechanical and biological that are taking place in the world production of food, would be more than sufficient to cope with the flood, so that it is progressively easier to obtain subsistence. It may be doubted whether either supposition is yet applicable to Indian conditions. In the first place there are as yet no indications of any tendency on the part of the countryman to modify his view of the blessedness of the man who has a quiverful of sons and is not ashamed to meet his enemy in the gate, and, in the second, little sign that agriculture is likely to be appreciably affected during the next decade by means such as those which have so greatly increased wheat production on the American continent. It is however obvious that apart from the law of diminishing returns the ability of agriculture to provide an occupation is limited. In Europe it has been estimated that the maximum population which can be supported by agricultural occupations is 250 to the sq. mile, while an estimate of somewhat higher density has been made in the case of the United States of America, and the island of Porto Rico in the West Indies has an agricultural population of nearly 400 to the sq. mile. The number is, as we have seen, very

much greater than this in many parts of India, and the rural population which attains the extraordinary density mentioned of parts of Bengal and of the Malabar Coast indicates the extent to which fertile land intensively cultivated together with fish-yielding waters could sustain a population whose material wants are reduced to the minimum by the natural environment of a tropical climate. These, of course, are extreme cases taken from the two most fertile parts of India,* but generally speaking the maximum density of the agricultural population can be far greater in India than in Europe, not only on account of the greater fertility of the land but on account of the diminution in the absolute necessities of life corresponding to a less rigorous climate. The real difficulty is that to cultivate on anything like economic lines the number of individuals that can work on a given area of ground is limited; and though the food product may be ample for many more than that number, a large increase in the population must either lead to excessive subdivision of the areas cultivated, and so to a diminution in production on account of uneconomic holdings, or on the other hand, to a floating population which is not engaged in agriculture and which has nothing to exchange with the producers for the food which it requires. The employment of this surplus in industrial activity would of course, meet the difficulty for a time, but can only prove a permanent cure if the increase of the population be limited not only to the food producible but also to the saturation point of the demand for industrial labour. When the latter point is passed, as in the United Kingdom, where the increase in population during the last decade was approximately equivalent to the number of unemployed in 1931, unemployment will arise and the fact that the food supply is adequate is to this extent irrelevant. As in some parts of Europe, life on the land as a cultivator is an end in itself rather than a mere means of production of victuals, hence the real danger of a growth of population which must suffer discomfort because this end becomes rapidly more difficult of realisation. The present problem in India would therefore seem to be less the actual total increase of the population, than the increase of that portion of the population, by far the greater part of course, which is occupied in agriculture and allied pursuits, *i.e.*, the population represented by sub-class I of the Occupation Table; and an additional complication of the problem appears in the fact that the cultivating classes in India generally lack the capital required for the extension of cultivation beyond the existing margin, particularly where the cultivation practised is already dependent on a somewhat problematic rainfall. Mechanical improvements which reduce the need for labour are a doubtful palliative, though no such doubt attaches to biological improvements, enabling a better crop to be obtained from a smaller area. Labour-saving devices will do little for a peasantry whose work takes up part only of the year and certainly they will not enable a greater number of peasants to live on the same area of land where there is neither demand nor market facilities for the minor products of agriculture which contribute to the income of the European small holder or on which, such as poultry, pigs or potatoes, he may principally depend.

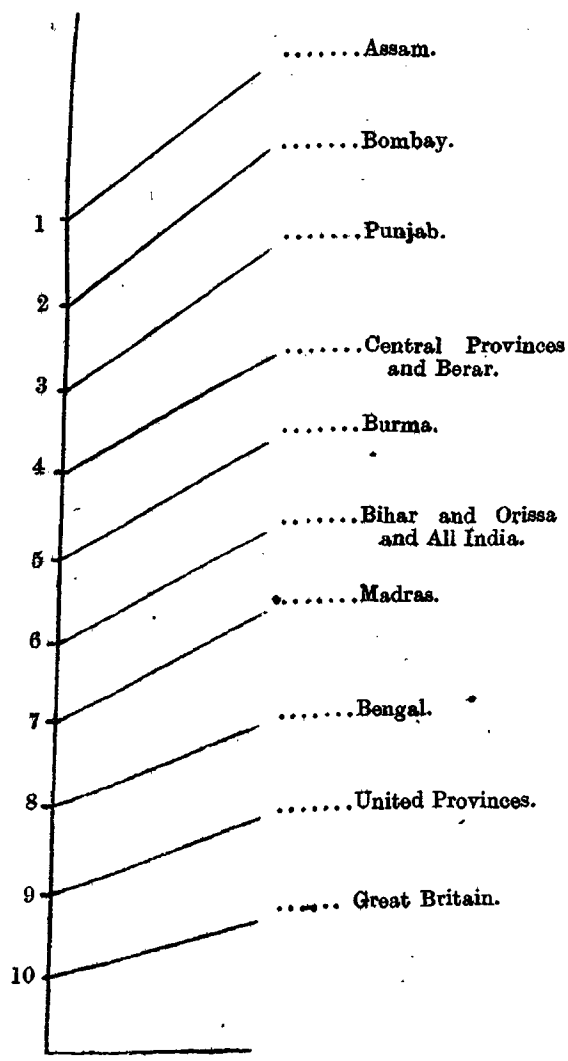
Remedies.

35. It appears to be the general opinion of Indian economists who discuss the population problem of this country that the only practical method of limiting the population is by the introduction of artificial methods of birth control, though it is not easy to exaggerate the difficulties of introducing such methods in a country where the vast majority of the population regard the propagation of male offspring as religious duty and the reproach of barrenness as a terrible punishment for crimes committed in a former incarnation. It is justly pointed out by the Census Superintendent of Mysore State that the practice of universal and of early marriage is a social custom and is not, in fact, followed from religious motives, but it is almost always religious arguments which are put forward in opposition to a change in social custom by any society anywhere, and though the religious sanction may be the result rather than the cause of the social custom, this fact only gives the sanction greater force. Nevertheless a definite movement towards artificial birth-control appears to be taking place and is perhaps less hampered by misplaced prudery than in some countries which claim to be more civilized; thus not only is artificial control publicly advocated by a number of medical writers but Madras can boast a Neo-Malthusian League with two Maharajas, three High Court judges and four or five men very prominent

* An examination of the population question as regards Bengal by the Census Superintendent of that province is printed as an appendix to this chapter.

in public life as its sponsors. Meanwhile it would appear, in view of the present rate of increase, that efforts to reduce the rate of infantile mortality should be preceded by precautions to reduce the birth-rate, and that if the luxury of 'baby weeks' be permitted they should at least be accompanied by instruction in birth-control. A move in this direction has already been made by the Government of Mysore State, which in 1930 sanctioned the establishment of birth-control clinics in the four principal hospitals of the State.

There are perhaps other methods of checking an excessive increase in population. It has been clearly demonstrated in Europe that a rise of the standard in living is normally accompanied by a fall in the birth-rate, and the same principle no doubt operates in this country; but, even while we must admit the truth of Bacon's aphorism that "Repletion is an Enemy to Generation", a mere superfluity of food supply is not enough, as it only enables the possessor to breed up to the subsistence level again. In order that a higher standard of living may affect the rate of reproduction it is apparent that not only is an increase in education and culture involved, since it seems definitely established that intellectual activity acts as a check upon fertility, but also the psychological appreciation of a higher probability of survival. Recent studies of the population problem in the Pacific by Rivers, Pitt-Rivers, Roberts and others have clearly demonstrated the importance of psychological factors as affecting the increase or decrease of the population, and although the environment is generally entirely different in India, that is no reason for supposing that psychology is any less important here in its action on the rate of reproduction. It is also likely that a changed outlook, in which a greater value was attached to the goods of this world and less regard paid to the speculative possibilities of the next, would operate in the same direction; but it seems doubtful if a materialistic standpoint would commend itself to Indian culture.



Population Increase 1921-31
(with acknowledgments to the S. C. O., Madras).

SUBSIDIARY TABLE I.

Area of India and the Provinces and States.

Province, State or Agency.	Area in Square Miles. 1931.	1921.	1881.	Variation : Increase+, Decrease—. 1921-1931.	1881-1931.
INDIA	**1,808,679**	**1,805,332**	**1,372,588**	**+3,347**	**+436,091**
Provinces	**1,096,171**	**1,094,300**	**911,075**	**+1,871**	..
Ajmer-Merwara	2,711	2,711	2,711	..	..
Andaman and Nicobar Islands	3,143	3,143	..	..	..
Assam	55,014	53,015	*46,341	+1,999	+20,993
Baluchistan (*District and Administered Territories*).	54,228	54,228	..	..	..
Bengal	77,521	76,843	*193,198	+678	+1,459
Bihar and Orissa	83,054	83,161		—107	
Bombay (*including Aden*)	123,679	123,621	†124,122	+58	..
Aden	*80*	*80*	..	..	..
Burma	233,492	233,707	87,220	—215	+146,272
Central Provinces and Berar	99,920	99,876	102,156	+44	—2,236
Coorg	1,593	1,582	1,583	+11	+10
Madras	142,277	142,260	141,001	+17	+2,869
North-West Frontier Province (*Districts and Administered Territories*).	13,518	13,419		+99	
Punjab	99,200	99,846	106,632	—646	+6,659
Delhi	573	593		—20	
United Provinces of Agra and Oudh ..	106,248	106,295	106,111	—47	+137
States and Agencies	**712,508**	**711,032**	**461,513**	**+1,476**	..
Assam States	12,320	8,456	..	+3,864	..
Baluchistan States	80,410	80,410	..	..	..
Baroda State	8,164	8,127	8,570	+37	—406
Bengal States	5,434	5,434	..	..	..
Bihar and Orissa States	28,648	28,648	..	..	..
Bombay States	27,994	27,982	73,753	+12	—10,317
Central India Agency	51,597	51,531	75,079	+66	+2,885
Gwalior State	26,367	26,357		+10	
Central Provinces States	31,175	31,176	28,834	—1	+2,341
Hyderabad State	82,698	82,698	71,771	..	+10,927
Jammu and Kashmir State	84,516	84,258	..	+258	..
Madras States Agency	10,698	10,696	..	+2	..
Cochin State	*1,480*	*1,479*	*1,361*	*+1*	*+119*
Travancore State	*7,625*	*7,625*	*6,730*	..	*+895*
Other Madras States	*1,593*	*1,592*	‡	*+1*	..
Mysore State	29,326	29,475	24,723	—149	+4,603
North-West Frontier Province (*Agencies and Tribal Areas*).	22,838	25,500		—2,662	
Punjab States	5,820	5,820	35,817	..	+24,082
Punjab States Agency	31,241	31,239		+2	
Rajputana Agency	129,059	128,987	129,750	+72	—691
Sikkim State	2,818	2,818	..	..	..
United Provinces States	5,943	5,949	5,125	—6	+818
Western India States Agency	35,442	35,471	§	—29	..

NOTE.—The difference in areas is due in cases to the use of revised survey figures and to corrections for fluvial action and also to inter-provincial transfers, *vide* explanatory notes to Imperial Tables I and II in Part II.

* Inclusive of States; † Excludes Aden; ‡ Included against Madras; § Included against Bombay States.

SUBSIDIARY TABLE II.

The population of India at six Censuses.

		INDIA.	Provinces.	States.
Total Population ..	1931	352,837,778	271,526,933	81,310,845
	1921	318,942,480	246,856,191	72,086,289
	1911	315,156,396	243,797,647	71,358,749
	1901	294,361,056	231,142,489	63,218,567
	1891	287,314,671	220,765,285	66,549,386
	1881	253,896,330	198,448,631	55,447,699
Males	1931	181,828,923	139,931,556	41,897,367
	1921	163,995,554	126,798,887	37,196,667
	1911	161,338,935	124,641,244	36,697,691
	1901	149,951,824	117,426,782	32,525,042
	1891	146,769,629	112,335,393	34,434,236
	1881	129,949,300	101,119,128	28,830,172
Females	1931	171,008,855	131,595,377	39,413,478
	1921	154,946,926	120,057,304	34,889,622
	1911	153,817,461	119,156,403	34,661,058
	1901	144,409,232	113,715,707	30,693,525
	1891	140,545,042	108,429,892	32,115,150
	1881	123,947,030	97,329,503	26,617,527

The above figures are inclusive of the population of areas newly enumerated at successive censuses as follows :—

Total population of new areas in ..	1891	5,713,902*	3,112,994	2,600,908
	1901	2,672,077†	1,654,377	1,017,700
	1911	1,793,365	94,495	1,698,870
	1921	86,633	86,633	....
	1931	35,058‡	35,058	....
Male population of new areas in ..	1891	2,872,513	1,507,043	1,365,470
	1901	1,362,651	837,440	525,211
	1911	945,346	47,581	897,765
	1921	43,781	43,781	....
	1931	9,746	9,746	....
Female population of new areas in ..	1891	2,793,074	1,605,951	1,187,123
	1901	1,283,297	790,808	492,489
	1911	848,019	46,914	801,105
	1921	42,852	42,852	....
	1931	9,601	9,601	....

NOTE.—The details of the areas newly included at the 1921 and previous censuses will be found on the fly leaf of Table II in the 1921 India Tables Volume. Details of the 1931 figures will be found on the title page to Imperial Table II of the recent tables volume.

* Sex details of 48,315 persons are not available.

† Sex details of 26,129 persons are not available.

‡ Sex details of 15,711 persons are not available.

SUBSIDIARY TABLE III.

Calculated Intercensal Population, 1922-1930.

Year.	1922.	1923.	1924.	1925.	1926.	1927.	1928.	1929.	1930.
Population ..	318,975,613	319,041,879	319,174,412	319,439,478	319,969,610	321,029,873	323,150,400	327,391,454	335,873,562

SUBSIDIARY TABLE IV.

Population distributed by provinces and with variation per cent. in the population and mean density per square mile.

Serial No.	Province, State or Agency.	Area in Square Miles.	Population. 1931. Persons.	Population. 1931. Males.	Population. 1931. Females.	Population. 1921. Both Sexes.	Percentage of Variation. Increase+, Decrease—. 1921-31.	1911-21.	1881-1931.	Mean Density per cent. Square mile. 1931.	1921.	1911.
	1	2	3	4	5	6	7	8	9	10	11	12
	INDIA ..	**1,808,679**	**352,837,778**	**181,828,923**	**171,008,855**	**318,942,480**	**+10·6**	**+1·2**	**+39·0**	**195**	**176**	**174**
	Provinces ..	**1,096,171**	**271,526,933**	**139,931,556**	**131,595,377**	**246,856,191**	**+10·0**	**+1·3**	**+36·8**	**248**	**225**	**222**
1	Ajmer-Merwara ..	2,711	560,292	296,081	264,211	495,271	+13·1	—1·2	+21·6	207	183	185
2	Andaman and Nicobar Islands.	3,143	29,463	19,702	9,761	27,086	+8·8	+2·4	+101·4	9	9	8
3	Assam	55,014	8,622,251	4,537,206	4,085,045	7,459,128	+15·6	+13·4	+79·2	157	136	120
4	Baluchistan ..	54,228	463,508	270,004	193,504	420,648	+10·2	+1·5	+21·3*	9	8	8
5	Bengal	77,521	50,114,002	26,041,698	24,072,304	46,702,307	+7·3	+2·7	+37·9	646	602	587
6	Bihar and Orissa ..	83,054	37,677,576	18,794,138	18,883,438	33,995,418	+10·8	—1·4	+21·6	454	409	415
7	Bombay Presidency including Aden.	123,679	21,930,601	11,535,903	10,394,698	19,348,219	+13·3	—1·8	+32·8	177	156	159
8	Burma	233,492	14,667,146	7,490,601	7,176,545	13,212,192	+11·0	+9·1	+292·5	63	57	53
9	Central Provinces and Berar.	99,920	15,507,723	7,761,818	7,745,905	13,912,760	+11·5	—0·0	+29·8	155	139	139
10	Coorg	1,593	163,327	90,575	72,752	163,838	—0·3	—6·4	—8·4	103	103	110
11	Delhi	573	636,246	369,497	266,749	488,452	+30·3	+18·6	+81·3	1,110	852	723
12	Madras	142,277	46,740,107	23,082,999	23,657,108	42,318,985	+10·4	+2·2	+51·6	328	297	291
13	North-West Frontier Province (Districts and Administered Territories).	13,518	2,425,076	1,315,818	1,109,258	2,251,340	+7·7	+2·5	+53·9	179	167	163
14	Punjab	99,200	23,580,852	12,880,510	10,700,342	20,685,478	+14·0	+5·7	+39·2	238	209	197
15	United Provinces of Agra and Oudh.	106,248	48,408,763	25,445,006	22,963,757	45,375,069	+6·7	—3·1	+10·6	456	427	440
	States and Agencies ..	**712,508**	**81,310,845**	**41,897,367**	**39,413,478**	**72,086,289**	**+12·8**	**+1·0**	**+46·6**	**114**	**101**	**100**
16	Assam States ..	12,320	625,606	306,927	318,679	531,118	+17·8	+10·2	+96·8	51	43	39
17	Baluchistan States ..	80,410	405,109	218,410	186,699	378,977	+6·9	—9·3	—5·5*	5	5	5
18	Baroda State ..	8,164	2,443,007	1,257,817	1,185,190	2,126,522	+14·9	+4·6	+12·0	299	260	249
19	Bengal States ..	5,434	973,336	516,162	457,174	896,926	+8·5	+9·0	+39·4	179	165	151
20	Bihar and Orissa States	28,648	4,652,007	2,288,422	2,363,585	3,959,669	+17·5	+0·4	+93·0	162	138	138
21	Bombay States ..	27,994	4,468,396	2,288,623	2,179,773	3,867,819	+15·5	+0·1	+28·2	160	138	138
22	Central India Agency	51,597	6,632,790	3,405,438	3,227,352	6,002,551	+10·5	—2·1	+22·0*	129	116	119
23	Central Provinces States.	31,175	2,483,214	1,235,385	1,247,829	2,066,900	+20·1	—2·4	+79·0	80	66	68
24	Gwalior State ..	26,367	3,523,070	1,867,031	1,656,039	3,193,176	+10·3	—1·3	+14·6*	134	121	123
25	Hyderabad State ..	82,698	14,436,148	7,370,010	7,066,138	12,471,770	+15·8	—6·8	+46·6	175	151	162
26	Jammu and Kashmir State	84,516	3,646,243	1,938,338	1,707,905	3,320,518	+9·8	+5·1	+43·3†	43	39	37
27	Madras States Agency	10,698	6,754,484	3,373,032	3,381,452	5,460,312	+23·7	+13·5	+101·9	631	510	450
	Cochin State ..	*1,480*	*1,205,016*	*589,813*	*615,203*	*979,080*	*+23·1*	*+6·6*	*+100·7*	*814*	*662*	*620*
	Travancore State ..	*7,625*	*5,095,973*	*2,565,073*	*2,530,900*	*4,006,062*	*+27·2*	*+16·8*	*+112·2*	*668*	*525*	*450*
	Other Madras States	*1,593*	*453,495*	*218,146*	*235,349*	*475,170*	*—4·6*	*+2·2*	*+32·1*	*285*	*298*	*292*
28	Mysore State ..	29,326	6,557,302	3,353,963	3,203,339	5,978,892	+9·7	+3·0	+56·6	224	204	198
29	North-West-Frontier Province (Agencies and Tribal Areas).	22,838	2,259,288	1,212,347	1,046,941	2,825,136	—20·0	+74·2	+2,590·8*	99	124	71
30	Punjab States ..	5,820	437,787	229,290	208,497	408,019	+7·3	—1·0	+21·5	75	70	71
31	Punjab States Agency	31,241	4,472,218	2,451,394	2,020,824	4,008,017	+11·6	+5·5	+27·7	143	128	122
32	Rajputana Agency ..	129,059	11,225,712	5,885,028	5,340,684	9,831,755	+14·2	—6·5	+11·1	87	76	82
33	Sikkim State ..	2,818	109,808	55,825	53,983	81,721	+34·4	—7·1	+266·5†	39	29	31
34	United Provinces States.	5,943	1,206,070	618,171	587,899	1,134,881	+6·3	—4·6	+9·7	203	191	200
35	Western India States Agency.	35,442	3,999,250	2,025,754	1,973,496	3,541,610	+12·9	+0·5	+16·5	113	100	99

* Variation calculated from 1901-1931.

† Variation calculated from 1891-1931.

SUBSIDIARY TABLE V.

Variation in Natural Population 1921—1931.

Province, State or Agency.	Population in 1931.				Population in 1921.				Variation per cent. (1921-1931) in Natural population Increase (+) Decrease (—)
	Actual population.	Immigrants.	Emigrants.	Natural population.	Actual population.	Immigrants.	Emigrants.	Natural population.	
1	2	3	4	5	6	7	8	9	10
INDIA ..	**352,837,778**	**732,204**	**656,709**	**352,763,925**	**318,885,980**	**603,526**	**1,050,951**	**319,333,405**	**+10·5**
Ajmer-Merwara	560,292	106,444	60,909	514,757	495,271	109,890	42,420	427,801	+20·3
Andaman and Nicobar Islands	29,463	14,745	553	15,271	27,086	15,120	316	12,282	+24·3
Assam	9,247,857	1,408,763	74,001	7,913,095	7,990,246	1,290,157	75,978	6,776,067	+16·8
Baluchistan	868,617	90,053	42,771	821,335	799,625	78,387	60,421	781,659	+5·1
Bengal	51,087,338	1,853,708	960,017	50,193,647	47,592,462	1,929,640	697,047	46,359,869	+8·3
Bihar and Orissa ..	42,329,583	509,837	1,758,290	43,578,036	37,961,858	422,244	1,955,048	39,494,662	+10·3
Bombay (*including Aden—1931 figures only*).	26,398,997	1,250,461	601,469	25,750,005	26,701,148	1,081,649	592,009	26,211,508	—1·8
Burma	14,667,146	775,963	24,368	13,915,551	13,212,192	706,725	20,295	12,525,762	+11·1
Central Provinces and Berar	17,990,937	655,574	422,176	17,757,539	15,979,660	609,504	407,294	15,777,450	+12·6
Coorg	163,327	38,718	3,233	127,842	163,838	83,937	2,852	132,753	—0·4
Delhi	636,246	263,188	69,478	442,536	488,188	185,770	69,350	371,768	+19·0
Madras	47,193,602	267,195	1,199,812	48,126,219	42,794,155	209,862	1,756,462	44,340,755	+8·5
North-West Frontier Province ..	4,684,364	159,166	90,892	4,616,090	5,076,476	157,562	84,495	5,003,409	—7·7
Punjab (*including Agency*)	28,490,857	674,152	707,478	28,524,183	25,101,060	627,137	549,429	25,023,352	+14·0
United Provinces of Agra and Oudh.	49,614,833	559,605	1,557,954	50,613,182	46,510,668	480,414	1,402,541	47,432,795	+6·7
Baroda State	2,443,007	324,579	205,202	2,323,630	2,126,522	232,494	221,602	2,115,630	+9·8
Central India Agency ..	6,632,790	600,766	482,564	6,514,588	5,997,023	548,094	486,643	5,935,572	+9·8
Cochin State..	1,205,016	87,417	48,240	1,165,839	979,080	39,759	28,338	967,659	+20·5
Gwalior State	3,523,070	281,550	296,835	3,538,355	3,186,075	290,340	289,029	3,184,764	+11·1
Hyderabad State ..	14,436,148	247,795	332,856	14,521,209	12,471,770	202,781	363,751	12,632,740	+1·5
Jammu and Kashmir State ..	3,646,243	64,196	94,520	3,676,567	3,320,518	63,420	84,291	3,341,389	+10·0
Mysore State	6,557,302	344,592	125,496	6,338,206	5,978,892	314,531	102,104	5,766,465	+9·9
Rajputana Agency ..	11,225,712	330,939	846,866	11,741,639†	9,844,384	243,002	868,117	10,469,499	+12·2
Sikkim State	109,808	15,417	7,213	101,604	81,721	22,978	4,133	62,876	+61·6
Travancore State	5,095,973	135,103	53,336	5,014,206	4,006,062	73,591	30,250	3,962,721	+26·5
Western India States Agency ..	3,999,250	109,674	294,345	4,183,921	*	*	*	*	..

NOTES.—(*i*) The figures for the Provinces are inclusive of the States attached to them except in the case of Madras where they exclude Cochin and Travancore.

(*ii*) The 1921 figures against Bombay exclude details for Aden for which unit no birthplace table was prepared at that census.

(*iii*) *Columns 2 and 6.*—Persons not enumerated by birthplace or whose birthplace was not returned have been included in these columns.

(*iv*) *Column 4.*—The figures against India in this column represent emigrants to foreign countries details of which will be found in subsidiary table 4 to Chapter III.

* Separate figures are not available as this unit was combined with the Bombay States in 1921.

† Includes persons enumerated in the Colonies who returned Ajmer-Merwara as their birthplace.

SUBSIDIARY TABLE VI.

Comparison of Areas and Population of Districts in Main Province.

Province.	Number of districts.	Area and Population of Districts.						Number of districts with population exceeding one million.
		Average Area.	Average population.	Maximum Area in square miles.		Maximum Population.		
Assam	12	4,584·5	718,521	Lushai Hills	8,092	Sylhet	2,724,342	1
Baluchistan	6	9,038	77,251	Chagai	20,036	Quetta-Pishin ..	147,541	*Nil.*
Bengal	28	2,768·6	1,789,786	Mymensingh	6,237	Mymensingh ..	5,130,262	24
Bihar and Orissa ..	21	3,955	179,417	Ranchi	7,102	Darbhanga	3,166,094	16
Bombay (*excluding Aden*)	28	4,414·3	781,397	Thar and Parkar ..	13,636	Ratnagiri	1,302,527	8
Burma	41	5,694·9	357,735	Southern Shan States ..	36,416	Southern Shan States ..	870,230	*Nil.*
Central Provinces and Berar.	22	4,541·8	704,897	Raipur	9,717	Raipur	1,527,573	2
Madras	26	5,472·2	1,797,696	Agency Division ..	19,869	Malabar*	3,533,944	22
North-West Frontier Province.	5	2,703·6	485,015	Dera Ismail Khan ..	3,471	Peshawar	974,321	*Nil.*
Punjab	29	3,420·7	813,133	Kangra	9,976	Lahore	1,378,570	6
United Provinces of Agra and Oudh.	48	2,213·5	1,008,516	Garhwal	5,612	Gorakhpur	3,567,561	22

* Including Laccadives.

SUBSIDIARY TABLE VII.

Persons per House and Houses per square mile.

Province, State or Agency.	Average number of Persons per House.					Average number of Houses per square mile.				
	1931.	1921.	1911.	1901.	1891.	1931.	1921.	1911.	1901.	1891.
INDIA	**5·0**	**4·9**	**4·9**	**5·2**	**5·4**	**39·3**	**36·1**	**35·8**	**31·6**	**33·9**
Ajmer-Merwara	4·6	4·2	4·1	4·4	5·3	45·1	43·3	45·3	39·6	37·5
Andaman and Nicobar Islands ..	5·2	8·2	7·2	..	..	1·8	1·1	1·2	..	..
Assam	4·9	4·7	4·6	4·6	4·8	28·2	27·4	25·0	23·1	22·8
Baluchistan	5·2	5·0	4·9	4·5	..	1·2	1·2	1·3	2·3	..
Bengal	4·7	5·1	5·3	5·2	5·2	131·8	113·6	104·5	100·2	96·0
Bihar and Orissa	5·2	5·1	5·2	5·3	5·7	73·2	67·0	66·5	62·2	71·4
Bombay (*including Aden*) ..	5·1	4·9	4·9	5·1	5·4	34·4	29·3	29·5	26·5	25·6
Aden	*8·4*	*8·3*	..	..	..	*76·6*	*85·5*	..	..	..
Burma	4·7	4·8	4·9	5·0	5·3	13·4	11·7	10·7	8·8	8·3
Central Provinces and Berar ..	5·0	5·0	4·9	4·8	5·0	27·4	24·3	24·8	21·3	22·5
Coorg..	4·8	5·2	5·2	5·9	6·4	21·3	19·8	21·3	19·3	16·9
Delhi	4·6	4·3	*a*	*a*	*a*	242·4	193·4	*a*	*a*	*a*
Madras	5·1	5·1	5·3	5·4	5·3	64·9	58·5	55·0	50·3	47·6
*North-West Frontier Province ..	5·0	5·2	5·0	6·1	6·1	36·0	32·6	32·4	21·3	17·9
Punjab	4·8	4·5	4·5	6·2	6·6	47·5	43·9	43·0	29·7	27·2
United Provinces of Agra and Oudh	4·8	4·6	4·6	5·5	5·7	92·7	90·8	92·3	78·7	74·2
Baroda State	4·3	4·1	4·0	4·0	4·5	68·9	63·1	61·9	60·5	65·5
Central India Agency	4·6	4·5	4·6	5·1	5·2	27·8	25·6	26·4	21·5	25·2
Cochin State	5·8	5·5	5·6	5·6	5·4	140·2	120·5	120·0	107·1	96·1
Gwalior State	4·6	4·5	*b*	*b*	*b*	29·1	27·2	*b*	*b*	*b*
Hyderabad State	4·4	4·6	4·9	4·9	5·0	40·1	32·9	32·8	27·6	27·6
Jammu and Kashmir State ..	5·4	5·5	5·7	6·3	5·7	7·9	7·1	6·6	5·7	5·5
Mysore State	5·0	5·0	5·0	4·9	5·5	44·7	40·6	39·3	37·7	32·0
Punjab States Agency	4·7	4·5	4·4	*a*	*a*	30·6	28·5	28·0	*a*	*a*
Rajputana Agency	4·7	4·3	4·3	5·1	5·5	18·5	17·6	18·9	15·0	16·7
Sikkim State	4·1	5·5	5·3	5·3	..	9·6	5·2	5·9	3·9	—
Travancore State	5·5	5·3	5·2	5·1	5·0	122·0	99·9	87·3	81·9	76·8
Western India States Agency ..	4·7	*c*	*c*	*c*	*c*	24·2	*c*	*c*	*c*	*c*

a. Included against Punjab.
b. Included against Central India Agency.
c. Included against Bombay.

* Excludes the Agencies and Tribal Areas where it has not been possible to ascertain the number of occupied houses.

SUBSIDIARY TABLE VIII.

Comparison between Census figures and Vital Statistics.

Province or State.	In 1921-30 total number of		Number per mille of population of 1921 of		Excess (+) or Deficiency (—) of Births over Deaths.	Increase (+) or Decrease (—) of population of 1931 compared with 1921.	
	Births.	Deaths.	Births.	Deaths.		Natural population.	Actual population.
1	2	3	4	5	6	7	8
Assam	2,079,593	1,628,739	303·5	237·7	+450,854	+892,464	+1,163,123
Bengal	13,255,369	11,791,885	284·9	253·5	+1,463,484	+3,787,656	+3,411,695
Bihar and Orissa	12,347,593	9,093,498	363·1	267·4	+3,254,095	+3,343,122	+3,682,158
Bombay (*excluding Aden*) ..	6,872,564	5,144,403	358·6	268·4	+1,728,161	+2,709,477	+2,587,404
Burma	2,980,296	2,264,838	275·4	209·3	+ 715,458	+1,432,906	+1,454,954
Central Provinces and Berar ..	6,083,012	4,659,404	437·2	334·9	+1,423,608	+1,646,032	+1,594,963
Delhi	217,661	164,529	434·9	328·7	+53,132	+70,768	+147,794
Madras	14,210,900	9,811,998	346·6	239·3	+4,398,902	+3,798,759	+4,421,122
North-West Frontier Province ..	599,824	505,065	280·9	236·5	+94,759	+206,308	+173,736
Punjab	8,658,686	6,230,304	422·0	303·7	+2,428,382	+3,099,356	+2,895,374
United Provinces	15,921,016	11,993,248	350·9	264·3	+3,927,768	+3,102,582	+3,033,694
Baroda State	582,578	446,906	274·0	210·2	+135,672	+207,992	+316,485
Cochin State..	142,516	91,233	145·6	93·2	+51,283	+198,180	+255,936
Hyderabad State	1,143,632	1,279,679	91·7	102·6	—136,047	+1,888,290	+1,964,378
Mysore State	1,125,590	960,862	188·3	160·7	+164,728	+571,662	+578,410
Travancore State	819,173	446,319	204·5	111·4	+372,854	+1,051,485	+1,089,911

SUBSIDIARY TABLE IX.

Reported birth-rate per mille* during the decade 1921-30 in the main Provinces.

Province.	Number of Births (both sexes) per mille in										Average Birth rate per mille during the decade.
	1921.	1922.	1923.	1924.	1925.	1926.	1927.	1928.	1929.	1930.	
1	2	3	4	5	6	7	8	9	10	11	12
Assam	29·6	28·4	28·8	31·0	29·1	30·8	30·3	31·2	32·8	31·4	30·3
Bengal	28·0	27·4	29·9	29·5	29·6	27·4	27·7	29·6	29·3	26·6	28·5
Bihar and Orissa ..	34·6	35·0	37·0	35·7	35·6	37·2	37·6	38·3	35·6	36·2	36·3
Bombay	32·6	32·4	35·6	35·6	34·7	37·1	36·9	38·2	38·3	37·4	35·9
Burma	30·9	30·7	29·5	27·4	25·4	27·6	25·1	25·9	26·4	28·9	27·8
Central Provinces and Berar	37·9	35·8	45·6	44·2	43·9	46·0	45·6	46·5	44·0	47·7	43·7
Delhi	40·6	41·2	42·1	42·4	41·6	41·0	40·5	48·3	47·9	49·3	43·5
Madras	27·0	30·0	33·1	34·9	33·7	36·1	36·5	37·4	37·9	39·8	34·6
North-West Frontier Province	27·3	23·7	27·6	27·0	26·9	30·2	29·3	32·5	30·8	25·6	28·0
Punjab	41·5	39·3	43·2	40·1	40·1	41·6	42·3	46·3	44·5	43·3	42·2
United Provinces.. ..	34·4	32·2	36·0	34·7	32·7	34·2	36·7	38·2	34·3	37·3	35·1

* *Calculated on the population figure of 1921.*

SUBSIDIARY TABLE X.

Reported death-rate per mille* during the decade 1921-30 in the main Provinces.

Province.	Number of Deaths (both sexes) per mille in										Average Death-rate per mille during the decade.		
	1921.	1922.	1923.	1924.	1925.	1926.	1927.	1928.	1929.	1930.	Persons.	Males.	Females.
1	2	3	4	5	6	7	8	9	10	11	12	13	14
Assam	26·5	26·9	23·5	27·3	22·5	23·0	23·5	22·2	20·9	21·4	23·8	23·9	23·5
Bengal	30·1	25·2	25·5	25·9	24·9	24·7	25·6	25·5	23·5	22·4	25·3	25·7	25·0
Bihar and Orissa ..	32·8	24·1	25·0	29·1	23·7	25·7	25·1	25·3	26·9	29·6	26·7	28·3	25·1
Bombay	26·0	23·6	25·9	27·6	23·7	28·6	25·7	27·3	30·5	29·5	26·8	26·6	27·1
Burma	21·3	22·2	20·9	21·5	18·8	20·9	19·6	21·3	22·1	20·8	20·9	21·5	20·3
Central Provinces and Berar.	44·0	29·3	30·5	32·6	27·3	34·3	31·3	33·7	34·1	37·8	33·5	35·2	31·7
Madras	20·2	21·0	22·2	24·5	24·4	25·6	24·3	26·4	25·3	25·5	23·9	24·6	23·3
North-West Frontier Province.	31·6	21·7	23·7	31·0	19·8	21·8	22·0	19·3	23·7	21·9	23·7	24·0	23·3
Punjab	30·1	22·1	30·9	43·4	30·0	36·5	27·5	24·7	28·8	29·7	30·4	29·3	31·6
United Provinces ..	39·6	25·0	23·4	28·3	24·8	25·1	22·6	24·2	24·3	27·2	26·4	26·9	25·9

* *Calculated on the population figure of 1921.*

SUBSIDIARY TABLE XI.

Reported deaths from certain diseases per mille in the main Provinces.

Disease.	Actual number of total deaths in 1921.	1922.	1923.	1924.	1925.	1926.	1927.	1928.	1929.	1930.	Total.	Average annual rate per mille.
1	2	3	4	5	6	7	8	9	10	11	12	13
ASSAM.												
Fever ..	107,626	112,094	106,347	113, 98	98,015	93,689	89,324	89,255	83,520	89,772	982,840	14·34
Cholera	12,829	16,219	3,728	19,182	6,233	10,275	15,392	6,915	7,765	6,332	104,870	1·53
Small-pox ..	2,774	2,610	3,213	1,647	2,745	4,840	5,237	8,461	1,648	1,208	34,383	0·50
BENGAL.												
Fever ..	1,070,368	885,268	909,795	912,408	874,228	822,774	789,006	752,003	713,531	705,066	8,434,447	18·61
Cholera ..	80,547	51,712	41,483	48,514	34,276	59,106	118,377	136,245	81,090	54,963	706,313	1·50
Small-pox ..	8,157	7,864	4,236	5,567	17,436	25,548	42,514	43,558	20,407	11,268	186,555	0·39
Plague ..	59	150	98	35	9	..	1	6	..	..	358	0·01
BIHAR AND ORISSA.												
Fever ..	769,871	578,656	599,840	660,635	557,224	584,444	559,360	564,979	602,938	643,518	6,120,565	18·00
Cholera ..	90,688	26,805	8,198	77,480	17,336	27,268	49,022	77,103	104,034	155,215	633,149	1·81
Small-pox ..	7,836	2,560	3,161	6,932	14,382	34,873	34,661	13,567	6,671	7,455	132,098	0·38
Plague ..	16,504	15,066	28,911	10,792	6,788	8,381	6,112	7,627	8,266	4,105	112,552	0·30
BOMBAY.												
Fever ..	226,100	197,888	196,231	214,563	183,764	222,476	183,543	206,356	246,428	223,274	2,100,623	10·98
Cholera ..	3,521	2,768	9,221	8,236	57	73	26,153	6,881	9,084	15,142	81,136	0·42
Small-pox ..	1,771	1,170	2,811	11,152	5,644	3,922	5,091	5,265	10,635	21,341	68,802	0·36
Plague ..	4,672	8,379	33,741	9,214	12,601	9,866	4,076	13,563	18,014	5,026	119,152	0·62
BURMA.												
Fever ..	82,741	82,884	78,629	75,288	68,685	72,790	75,321	76,815	78,546	83,950	775,649	7·14
Cholera ..	3,791	5,047	1,488	8,083	1,932	6,182	4,528	7,209	7,970	661	46,891	0·43
Small-pox ..	987	1,439	2,846	2,501	3,852	2,339	1,704	2,825	1,841	921	21,255	0·20
Plague ..	4,403	7,282	7,606	5,491	4,064	2,906	3,508	4,933	1,867	1,962	44,022	0·41
CENTRAL PROVINCES AND BERAR.												
Fever ..	327,930	237,164	233,575	240,944	204,667	252,609	224,068	259,109	271,054	287,330	2,538,450	18·24
Cholera ..	58,331	64	1,090	9,704	124	4,565	16,311	12,198	6,168	23,250	131,805	0·95
Small-pox ..	1,787	407	275	978	3,145	3,644	2,809	1,399	1,391	4,954	20,789	0·15
Plague ..	5,467	6,149	15,867	11,081	5,223	6,486	3,368	3,770	2,808	871	61,090	0·44
MADRAS.												
Fever ..	316,019	319,688	318,172	322,356	316,406	337,945	321,995	344,683	339,052	330,496	3,266,812	7·99
Cholera ..	27,064	16,502	5,169	51,971	44,815	24,407	35,334	57,677	25,846	18,746	307,531	0·76
Small-pox ..	9,792	22,801	24,434	18,810	20,478	10,957	7,781	7,618	9,708	8,025	140,404	0·33
Plague ..	11,875	9,193	12,110	3,922	2,014	2,143	2,457	2,106	1,801	1,459	49,080	0·12
PUNJAB.												
Fever ..	423,162	306,654	420,398	452,187	401,775	436,156	358,679	316,235	402,429	422,377	3,940,052	19·20
Cholera ..	19,215	128	11	3,351	3,049	87	11,286	2,034	2,309	1,181	42,651	0·21
Small-pox ..	4,575	1,608	2,140	4,040	7,038	17,595	9,920	8,764	7,763	5,341	68,784	0·34
Plague ..	2,553	7,780	50,086	251,261	37,630	108,287	8,452	8,282	2,053	554	476,938	2·32
UNITED PROVINCES.												
Fever ..	1,361,920	909,293	780,049	947,807	875,594	867,939	786,552	765,954	810,583	942,469	9,048,160	19·94
Cholera ..	149,667	2,330	2,591	67,000	7,653	6,166	28,285	44,941	50,924	61,334	420,891	0·93
Small-pox ..	1,439	242	747	2,724	9,373	12,020	7,894	3,012	11,725	11,071	60,247	0·13
Plague ..	24,009	23,291	74,187	56,210	49,091	57,297	15,570	80,943	37,678	10,860	429,136	0·94

APPENDIX TO CHAPTER I.—*By A. E. Porter—The problem of population growth and an estimate of the future population of Bengal.*

Malthus and Doubleday.

Starting with the proposition that population is necessarily limited by the means of subsistence there are in the field two principal rival theories of population growth. That deriving from Malthus has been* stated thus: first that population invariably increased where the means of subsistence increased unless prevented by some very powerful and obvious checks; and secondly that these checks which repress the superior power of population and keep its effects on a level with the means of subsistence are all resolvable into moral restraint, vice and misery. In other words nature having arranged for population to increase at a rate at which it is bound to overtake and pass the means of subsistence periodically redresses the balance by famines, epidemics and other calamities unless human intelligence steps in and prevents the excessive increase either by moral restraint or by measures for limiting the birth rate or for despatching the excess of population. The other theory derives from Thomas Doubleday and gives nature a rather less sinister role. It is that when the existence of a species is endangered "a corresponding effort is invariably made by nature for its preservation and continuance by an increase of fertility, and that this especially takes place whenever such danger arises from a diminution of proper nourishment or food, so that consequently the state of depletion or the deplethoric state is favourable to fertility, and that, on the other hand, the plethoric state or the state of repletion, is unfavourable to fertility in the ratio of the intensity of each state". It has been thought that this statement lays too much stress upon food and the position has been thus† restated: "In circumstances of ease the birth-rate tends to fall: in circumstances of hardship the birth-rate tends to rise".

Pell's Law of Births and Deaths.

The recorded census figures of population in Bengal probably cover too short a period to offer clear support to either one of these theories against the other. During the last sixty years the population of Bengal has become nearly half as large again as it was in 1872. There can be no question of intelligence checks having operated, and Bengal has been free from major calamities except in the decade before last when the influenza epidemic from which virtually the whole world suffered operated to reduce the rate of increase during the decade to a figure lower than any in its recorded census history. If the Malthusian doctrine holds, Nature is not yet aware of any need to apply a check to the increase of population in Bengal. If the Darwinian theory holds and "fecundity is in direct relation to the chances of death", and if the "law" of Doubleday applies, Nature still finds it necessary to maintain in Bengal a high birth-rate in order to keep pace with the high death-rate. In some points at least the Malthusian theory fails to explain the facts. In European countries and America, where most investigation has been carried out, it has been found‡ (*a*) that the birth-rate is negatively correlated with wealth and (*b*) that the indirect psychological and social effect of relative poverty as contrasted with relative wealth express themselves definitely and clearly in the sexual activity of human beings and through sexual activity in birth-rates. On the Malthusian theory in the wealthier classes where the means of subsistence are plentiful the population should increase more rapidly than in the poorer classes where they are less plentiful unless there were some voluntary interference with the rate of birth. The evidence of any such voluntary restriction is not conclusive and the theory generally held is that fertility itself decreases in the higher classes with increasing wealth and culture. The Malthusian doctrine also fails to account for the fact that a high birth-rate and a high death-rate are apparently invariably found together and that conversely where there is a low birth-rate there is also a low death-rate. This fact and the extreme doubtfulness of any evidence to show that conscious limitation of the family can account for the whole or a considerable part of the decrease in the birth-rate where it is low have led to the enunciation of the theory§ that "the net result of the variations of the degree of fertility under the direct action of the environment will bear an inverse proportion to the variations of the capacity for survival." Under this theory variations in the birth-rate are mainly due to the operation of a natural law which adjusts the degree of fertility to suit the death-rate of the race. The theory involves the postulate that the same conditions which lead to a reduction in the death-rate lead also to a decrease in fertility in some manner not yet known. The author of the theory suggests that the hormones assist in regulating the fertility of the germ cells, that the output of hormones by the endocrine glands is regulated by the nervous system which responds to the action of the environment and that the variations in the degree of fertility in response to the direct action of the environment will bear an inverse proportion to the development of nervous energy.

Raymond Pearl's Logistic Curve.

What may be considered to be a development of the second of these two theories is that put forward by ‖Raymond Pearl. This theory deduces that populations grow in size according to the same mathematical law that individual animals and plants follow in the growth of their bodies in size, and that human populations grow according to the same law as do experimental populations of lower organisms. The law of growth postulated on these deductions may be expressed by an equation with three constants, and the curve representing this equation is

* *E.g.*, by W. S. Thompson—*Population, A Study in Malthusianism*, 1915.

† By H. Sutherland, see *Proceedings of World Population Conference*, 1927, page 58.

‡ Pearl—*Biology of Population Growth*, 1926.

§ C. E. Pell, *The Law of Births and Deaths*, 1921.

‖ R. Pearl, *Studies in Human Biology*, 1924; *The Biology of Population Growth*, 1926.

called by Pearl a " logistic curve ". Equations have been worked out and fitted to the populations of fifteen countries of the world, the whole world and the population of certain cities and have been shown to give over the whole recorded census history of each a very reasonable congruity with the recorded facts. Assuming the mathematical form of the curve this theory allows account to be taken of the fact that a population is necessarily confined to a certain area and therefore must have an upper limit of population as well as a lower (which may be nil) and for the fact that population growth takes place in cycles conditioned amongst other factors by cultural achievement. It is possible that over a restricted period the logistic curve may not give so accurate an approximation to the recorded population as a curve of some other form. As a method of predicting future growth also it is liable to the irruption of influences not previously prevalent. Pearl states " predictions of future growth may at any time be altered by the entrance into the situation of new economic or social factors of a different sort to those which have operated during that past period which the equation covers. The population may be stimulated to start upon a new cycle of growth or slighter but still in kind new factors may alter somewhat the upper limiting value of the present cycle ". In certain instances however the logistic curve calculated by him gives astonishingly close approximations to the population actually recorded later. For the United States of America in 1930, for instance, a curve worked out before the census of 1920 suggested a population within 5 per 1,000 of that actually enumerated.

The logistic curve applied to Bengal.

Three curves of Pearl's logistic type have been fitted to the census population of Bengal and the population calculated from them ..... is compared with the observed population. The first is the equation worked out by Mr. P. J. Griffiths, I.C.S., and it was hoped to give in an appendix brief notes on the method by which it was calculated. Difficulties in setting up the rather complicated mathematical formulæ involved however have prevented this. Briefly however, the method consists in fitting a curve of the required type to three of the recorded census figures and then adjusting it by successive approximations to all the recorded figures. The desired approximation is one in which the algebraic sum of differences between the calculated and the actually recorded populations is nil and the sum of the squares of these differences is a minimum. Mr. Griffiths' curve was worked out for the population actually recorded in Bengal treating the interval between each census count as being exactly ten years and assuming that a negligible error only was introduced by this treatment and by neglecting to make an adjustment for change of area. For the other two calculations the recorded census population was adjusted to represent the estimated population in the area now constituting Bengal on the 1st March of each census year after 1881 and on the 1st March 1871. In making this calculation it was assumed that the population between any two census years changed at a uniform rate and that the rate of change between March 1871 and the date of the census in 1872 was the same as between 1872 and 1881. In arriving at the third equation allowance has been made for a small factor which Mr. Griffiths has noted as being disregarded in his calculation. The equations give a curve of reasonable fit and the last shown is the most accurate approximation for the observations in so far as the algebraic sum and the sum of squares of differences between the observed and calculated population at all census years from 1881 to 1931 is less with this equation than with the other two, whilst for all years including 1871 the sum of the differences is least and the sum of their squares not indeed least but very near to it.

General tendencies of population growth and upper limit of population suggested.

On the first equation the rate of increase was being successively enhanced till 1881 when it began to decline and the maximum population would be about 74 millions, which would be practically attained in 2063 A. D. On the third equation the point of maximum increase was passed in 1872, the rate of growth is also diminishing and a maximum population of about 68¾ millions would be expected which would be approximately reached in 2076 A. D. On neither equation is any lower limits of population implied, *i.e.*, the equations do not suggest that the present cycle of population growth began at any definite period, although on the third equation Bengal should have had a population of not less than two millions in 1668 A. D.

The logistic curve applied to the Muslim and Hindu population.

Mr. Griffiths also fitted curves to the population of Muslims and Hindus ....The correspondence of these figures, particularly for Hindus, is not so close as is obtained by the equation for the total population, but the Muslim equation gives a reasonable fit for the years 1881 to 1921. The total maximum population towards which the equations suggest that each community is tending would be for Muslims about 32 millions and for Hindus about 23¾ millions: in aggregate these figures fall short by 14 to 20 millions of the upper asymptotic population calculated for all communities. The Muslim and Hindu equations imply that the point at which the rate of increase ceased to be successively greater than in previous decades was passed in about 1886 by the Muslims and 1812 by the Hindus who are now approaching a stationary population. In any case the implication is that the Hindu community is further along its present growth cycle than the Muslim: in other words that it is approaching its maximum whilst by comparison the Muslim community is still rapidly growing. It is possible to find a suggested explanation, if this is actually true, in the fact that Muslims live mainly in the healthier regions of Eastern Bengal and Hindus in the less healthy and less progressive portions of West Bengal: but it would be interesting if similar calculations have been made, to know whether the implication arises also in the case of other provinces.

Estimate of population in 1941.

The equations for total populations suggest a population of between 53 and 53¼ millions in 1941. The communal equations appear (and Mr. Griffiths holds them) to be inappropriate. Equations of a more complicated form might give closer correspondence with the observed census figures, but the calculation involves very great labour, they might give no better estimates for the future and in any case they are scarcely worth making in view of the fact that only seven counts are on record. For the future all that can be said is that if the type of equation used is applicable to population growth and if the conditions influencing population growth in Bengal over the period to which it has been applied continue substantially unchanged for the future, the estimates of total population made by use of the equations deduced should represent the population to be expected. The equation themselves suffer however by being fitted to so few observed counts and the conditions influencing population growth cannot be predicted and are difficult to discover if a change in the cycle suggests their existence. Thus after the formation of the German Empire and the institution of the present constitutions in Japan, Pearl found that the cycle of growth was, as it were, speeded up and Germany and Japan starting from the population of that critical time took a leap forward and continued their cycle as if they had been at an earlier stage when growth was more rapid. It is by no means impossible that constitutional change may have a similar effect in Bengal and may affect the different communities to a different degree.

Can Bengal support a larger population.

The prospect or even the possibility of so considerable an increase in a population already one of the densest in the world may lead to apprehension that the population of Bengal is rapidly approaching numbers which cannot be sustained at any reasonable standard of living upon the means of subsistence which Bengal can produce for long. If population actually does increase according to some such law as that illustrated by the logistic curve the fact that considerable increases are inevitable makes the apprehension futile. Pearl himself has pointed out that this inevitable increase need not necessarily increase the misery in the world since first this result has not happened up to the present, secondly "the orderly evolution of human knowledge justifies us in assuming that science will keep pace in discovering means of expanding opportunities of happy human subsistence", and thirdly the human organism is itself adaptable to an extent not yet imagined. It cannot be denied that a large part of the population of Bengal lives at a very low level of subsistence, and that any increase of population must lead to increased distress unless the potentialities of the province are developed. What is suggested here is that these potentialities are such that pessimism as to the future condition of its population if considerable increase take place is not necessarily justified. Like the rest of India Bengal is notable for its undeveloped resources and the inefficiency with which such resources as it has are exploited. The soil is probably unlikely to deteriorate further and the general opinion about areas such as Bengal, where scanty manuring necessitates small crops, is that a dead level of yield was reached long ago and is conditioned by the rate at which plant food constituents are made available by weathering. The cultivator in Bengal practically never enriches the soil with any manure and the use of manures together with an improvement in the implements of agriculture which would then be rendered possible would probably increase enormously the output of the soil. It has been* estimated that improved methods would result in a reasonable expectation of increased food output of 30 per cent. throughout the whole of India. There is no doubt that any additional labour required under a more intensive form of cultivation could easily be obtained since the agriculturist in Bengal on the whole probably works less than agriculturists in almost any other part of the world. Subsidiary Table I [Bengal Report] also shows that of the total area cultivable only 67 per cent. is now actually under cultivation. If the total cultivable area were brought under cultivation and if improved methods of cultivation yielding an increase of 30 per cent. over the present yield were adopted it is clear from a simple rule of three calculation† that Bengal could support at its present standard of living a population very nearly twice as large as that recorded in 1931. Fresh areas in course of time will be brought under cultivation as lands on the Bay of Bengal accrete and reach a stage suitable for cultivation. Even at present it is clear that by far the majority of the food stuffs consumed in Bengal are locally produced. During 1930-31, taking only grains, pulses and flour, salt, sugar and spices, provisions and oilman's stores Bengal imported goods of the value of Rs. 821 lakhs and exported goods of the value of Rs. 281 lakhs. But the balance of trade during the same year amounted to Rs. 34,52·41 lakhs or more than three times the aggregate export and import trade. The seaborne trade of Calcutta is not confined to goods originating in or meant exclusively for Bengal, but in the year 1930-1931 jute, tea and hides contributed 77¼ per cent. of the total and Bengal contributed all the jutes, nearly all the hides and a very considerable part of the tea. It is consequently clear that the favourable balance of trade to a very small extent only was dissipated outside Bengal and that the balance itself provides sufficiently for an enormously increased importation of food stuffs were it necessary to import them at any time. Not only agriculture but also industry is at present in Bengal practically in its infancy. Reviewing production in India a Bengali writer‡ in 1924 came to the conclusion that the "outstanding feature of the productive system of India

* G. Clarke, *Proceedings of the XVIIth Indian Science Conference.*

† $\frac{100}{87} \times \frac{130}{100} = 194$.

‡ Rajani Kanta Das, *Production in India.*

is its inefficiency which is shown by the great wastage of resources on the one hand and the lower productivity of the industries on the other.... It is insufficient production to which is due India's poverty, both absolute and relative.... The lack of capital is partly responsible for the present low productivity....but.... could not .... be regarded as the fundamental cause of insufficient production in India..... Insufficient production is the result of inefficient labour, *i.e.*, lack of capacity on the part of the people to mobilise the physical, intellectual and moral forces of the country and to organise land and capital effectively for national production". Improvement in methods of production both agricultural and industrial should therefore very easily make possible the subsistence of such an increased population as is suggested by the figures already discussed, and the considerations deduced in this paragraph also make it possible to hope that such an increase of population may be attended with a very considerable increase in the material condition of the people and in the standard of living. It is clear at least that it is not yet time to indulge in gloomy forebodings on the ground that Bengal is over-populated, provided full use is made of the available resources of the country by improved methods.

Extravagant methods of population increase are a practical problem.

A final problem suggested by the growth of population in Bengal concerns the enormous wastage of life with which that growth is achieved. It is clear that what is of importance in population growth is the rate of increment. A high rate of increment can be achieved by a relatively low birth-rate if the death-rate is also low, whilst on the contrary a comparatively low rate of increase results from even a high birth-rate if the death-rate also is high. ....actually both the birth-rate and the death-rate in Bengal are very high and ..... there is consequently an appalling wastage of reproductive energy in maintaining the present increase of population. If the logistic theory of population growth is correct a retarded rate of increase is inevitable at the upper stages of the cycle of growth until finally a population is reached which to all intents and purposes is stationary. France in Europe where there is a notoriously low birth-rate probably illustrates this position best but an exhaustive* enquiry into the Arab population of Algiers suggested to Pearl that the retardation of the rate of increase is in general effected at the upper stages of the population growth by decrease both in the birth-rate and in the death-rate. The Arab population of Algiers showed both a decrease in the birth-rate which could not be ascribed to any voluntary measures and a decrease in the death-rate which equally could not be ascribed to improvement in public health measures since the traditional custom of the Arabs offer the utmost possible resistance to any changes in their habits which would improve sanitary conditions. Attempts to effect a retardation of the rate of increase by voluntary limitation of the birth-rate are almost certainly doomed to failure particularly in Bengal. They are repugnant to common sentiment in this country, the methods adopted are so expensive as to be beyond the reach of the great majority of the inhabitants and it is probably true to say that there are as yet none which can be relied upon as being absolutely certain and satisfactory. Figures for the different strata of society ..... show that there is no evidence to believe that contraceptive measures are used by the upper classes or those engaged in professions and the liberal arts; and it is certain that they are not practised at all in the lower strata of society. What appears to happen, if the analogy of Western Europe may be accepted, is that a decrease in the death-rate is inevitably followed at some period by a corresponding decrease in the birth-rate. It is clear also that fertility in western countries decreases with the increase of wealth and intellectual interests. It is therefore possible to expect that a reduction of the birth-rate by the adoption of improved measures of public health accompanied by an improvement in the standard of living, an increase in the spread of education and perhaps principally by a further emancipation of women and their introduction to spheres of usefulness and activity from which they are now in Bengal generally debarred by social custom and by the institution of purdah will in due course result in a decrease in the birth-rate corresponding with the decrease in the death-rate which it is the object of public health measures to bring about.

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* *Biology of Population Growth.*

CHAPTER II.

Urban and Rural.

Statistics of Urban and Rural Population.

36. The statistics of the urban population are to be found in Imperial Tables I, III, IV and V. Table I gives the territorial distribution of towns and villages and the figures of occupied houses and of the population separately for towns and villages ; Table III shows the population as distributed between villages and towns of different sizes ; Table IV gives the population of towns with the variations for fifty years, and Table V their territorial distribution and their composition by communities of different religions. The floating population which cannot definitely be allotted either to the urban or to the rural totals, that is to say persons enumerated in railway trains, boats or temporary encampments, will be found separately in Table III, and is so small (0·14%) compared to the whole population dealt with that it can be ignored in any consideration of the comparative figures. The total percentage of the population censused as urban was only 11%, showing an increase in its proportion to the whole of 0·8% since 1921. That is to say 6,510,151 or 19·2% of the total increase of the population during the past decade has taken place in towns. This increase is of course partly the natural increase of the pre-existing urban population and partly occasioned by migration from rural areas or by their incorporation into urban ones, while in estimating the growth of the urban population allowance must be made for the expansion of large villages to a size or importance which causes them to be classified as towns, and likewise for the omission of dwindling communities which fall out and are reclassified as rural. The tables therefore which deal with the changes in the urban population do not adhere to the population of the identical sites shown in the corresponding tables of former decades but give the total population enumerated in urban areas at the time of the census, as compared with the similar population ten years previously, the differences due to changing classification as urban or rural being shown in a supplementary table to Table IV. The accompanying table shows the variation in urban and rural populations respectively, and the very small proportion that the urban population bears to the whole is clearly indicated by the close relation between the variation in total population and that of the rural population as contrasted with the general antithesis between the total and the urban variations.

Province.	Variation 1921—31. Increase (+) Decrease (—) Per cent.	Variation in Urban Per cent.	Variation in Rural Per cent.
India	+10·6	+20·0	+9·6
Provinces	*+10·0*	*+18·4*	*+9·0*
1. Ajmer-Merwara	+13·1	+9·4	+15·0
2. Andamans and Nicobars	+8·8	..	+8·8
3. Assam	+15·7	+15·8	+15·2
4. Baluchistan	+10·2	+31·6	+5·9
5. Bengal	+7·3	+15·6	+6·7
6. Bihar and Orissa	+10·8	+20·3	+10·4
7. Bombay	+13·3	+11·6	+13·9
8. Burma	+11·0	+17·7	+10·3
9. Central Provinces and Berar	+11·5	+20·2	+10·4
10. Coorg	—0·3	+11·2	—1·0
11. Delhi	+30·3	+47·0	+2·7
12. Madras	+10·4	+20·1	+9·1
13. North-West Frontier Province	+7·7	+15·0	+6·4
14. Punjab	+14·0	+38·7	+11·0
15. United Provinces of Agra and Oudh	+6·7	+12·9	+5·9
States and Agencies	*+12·8*	*+25·5*	*+11·6*
16. Assam States	+17·8	+17·3	+21·7
17. Baluchistan States	+6·9	+16·0	+6·7
18. Baroda State	+14·9	+18·6	+13·9
19. Bengal States	+8·5	+10·4	+8·5
20. Bihar and Orissa States	+17·5	+29·5	+17·4
21. Bombay States	+15·5	+24·3	+14·3
22. Central India Agency	+10·5	+23·0	+9·3

Province.	Variation 1921—31. Increase (+) Decrease (—) Per cent.	Variation in Urban Per cent.	Variation in Rural Per cent.
23. Central Province States	+20·1	+55·9	+19·3
24. Gwalior State	+10·3	+28·2	+8·7
25. Hyderabad State	+15·8	+36·2	+13·6
26. Jammu and Kashmir State	+9·8	+17·4	+9·1
27. Madras States Agency	+23·7	+50·1	+20·7
Cochin State	*+23·1*	*+62·3*	*+17·2*
Travancore State	*+27·2*	*+36·4*	*+26·2*
Other Madras States	*—4·6*	*+204·1*	*—20·0*
28. Mysore State	+9·7	+21·1	+7·7
29. N. W. F. P. (*Agencies and Tribal Areas*)	—20·0	..	—20·0
30. Punjab States	+7·3	—6·6	+7·8
31. Punjab States Agency	+11·6	+19·1	+10·8
32. Rajputana Agency	+14·2	+18·1	+13·4
33. Sikkim State	+34·4	..	+34·4
34. United Provinces States	+6·3	+9·8	+5·9
35. W. I. States Agency	+12·9	+21·4	+10·7

Definition of Urban Areas.

37. Of a necessity the definition of a town for census purposes has resulted in a distinction which is sometimes arbitrary. Towns of not less than 100,000 inhabitants were to be treated as cities, and also any other towns which the Superintendent decided to treat as cities subject to the sanction of the Local Government. But the Census Code further provided for the treatment as a town of every municipality, all civil lines not included in municipal limits, every cantonment and every other continuous collection of houses, inhabited by not less than 5,000 persons, which the Superintendent of Provincial Census Operations decided to treat as urban. In making this decision the Census Superintendent was instructed to take into consideration the character of the population, the relative density of the dwellings, importance in trade and historic associations, and to avoid treating as towns overgrown villages without urban characteristics. The effect of the latter provision is to be inferred from the marginal statement which shows that of a total of 2,575 places treated as towns in 1931 600, or 23·3%, were places so classified by the Superintendent of Census Operations as (the quotation is from the Jammu and Kashmir State Census Code) "bearing the cachet of urbanity", although not covered by the standard definition and therefore not possessing any urban self-government. On the other hand their inhabitants amount to only 4,122,088, or 10·6 % of the urban population, which indicates the comparatively small size of these towns. There has been inevitably considerable variation in the latitude observed by census superintendents in the exercise of this discretionary power of classification, with the result that the varying degrees of urbanization of different provinces cannot necessarily be taken at their face value. Thus Mysore appears as having a higher proportion of urban population than Madras, but 66 of its 108 towns have a population of less than 5,000, and if such towns be omitted altogether the position of the two units is reversed. Similarly both Bombay and the United Provinces have large proportions of their total urban population represented by the inhabitants of small towns of 5,000 inhabitants or less. In this connection it will be well to bear in mind that the distinction between a small town and a large village as far as the conditions of life or occupation of its inhabitants is concerned is often meaningless, and the treatment of any place as urban rather than rural does not necessarily imply any degree of industrialization and only the minimum degree of a corporate life distinct from that of the ordinary

	Number.		Population.		Percentage of total urban population.	
	1921.	1931.	*1921.*	1931.	*1921.*	1931.
Total Towns	*2,316*	2,575	*32,475,276*	38,985,427	*100*	100
Municipalities, Civil Lines, Notified Areas; Cantonments, etc.	*1,276*	1,975	*25,453,745*	34,863,339	*78*	*89*
Towns arbitrarily classified as such for census purposes ..	*1,040*	600	*7,021,531*	4,122,088	*22*	*11*

village ; to quote the Census Superintendent for Bengal " many of the non-industrial towns.....differ but little in their conditions from large villages, except in the provision.....of an infrequent lamppost ". A comparison with the figures of last census gives some indication of the spread of local self-government.

The greatest degree of growth has been in the number of towns with a population of from 20,000 to 50,000, the total population of which is now nearly double that of towns of 50,000 to 100,000 and not very much short of that of the 38 towns whose individual populations exceed 100,000. The number of towns has been increased at this census by the treatment of cantonments as separate entities instead of including their figures with that of an adjoining town. Such inclusion may be justified in the case of suburbs, civil lines and notified areas which are more or less dependent for their existence on the proximity of a town, but a cantonment may be and frequently is not only of entirely independent origin and a self-contained unit, but actually indebted to the absence of a large urban population for the site chosen for occupation. Moreover even where it adjoins an old established urban area, the cantonment has a separate organisation and a corporate life of its own. Out of eighty-nine cantonments thirty- four have an elected board and thirteen a nominated board, the administration of the remainder being vested in a corporation sole All of these bodies have an executive officer usually provided in the case of the more important ones by the Cantonment Department. In any case the cantonment depends for its individual and separate existence on causes which are foreign to those governing the growth or decline of cities and towns, and it is therefore desirable to separate the population from that of the urban areas which they so often adjoin. This separation of cantonments has sometimes affected the classification of the town with which it was formerly combined. The figures in the margin indicate how little change there has been in the size of towns during the decade and in urbanization generally.

Class and description of town.	No. of towns in class.		Total population in towns of the class.	
	1921.	1931.	*1921.*	1931.
I. 100,000 and over ..	*35*	38	*8,211,704*	9,674,032
II. 50,000 to 100,000 ..	*54*	65	*3,517,749*	4,572,113
III. 20,000 to 50,000 ..	*200*	268	*5,968,794*	8,091,288
IV. 10,000 to 20,000 ..	*451*	543	*6,220,889*	7,449,402
V. 5,000 to 10,000 ..	*885*	987	*6,223,011*	6,992,832
VI. Under 5,000 ..	*691*	674	*2,333,129*	2,205,760

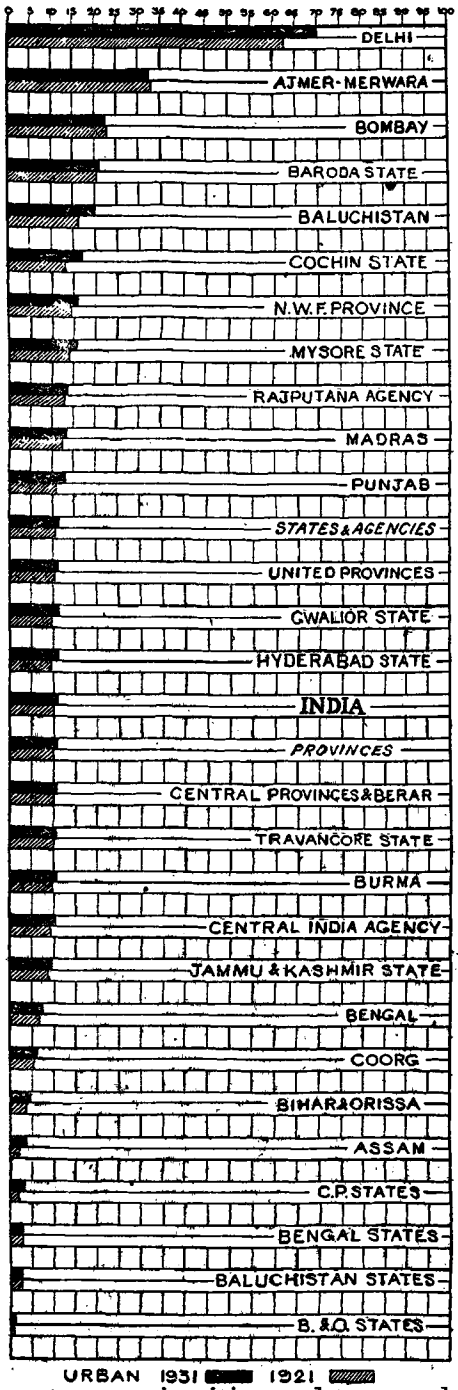
Urban Population.

38. The total urban population of India according to the above methods of classification comes to 38,985,427 or 11% of the total population. The distribution of the population between villages and towns is given in subsidiary table I to this chapter, the percentage of the population which is urban ranging from 3·4% of the whole population in Assam to 22·6% in Bombay. Compared to this latter, the most urbanized of the major provinces of India, the proportion of the population classified as urban is 49% in France, 50·8% in Northern Ireland, 53·7% in Canada, 56·2% in the U. S. A. and 80% in England and Wales.

Distribution of Population in groups of Towns according to size and in Rural Areas, 1891 to 1931.

Class of Places.	1931.		1921.		Per mille of total Population.				
	Places.	Population.	Places.	Population.	1931.	1921.	1911.	1901.	1891.
1	2	3	4	5	6	7	8	9	10
Total Population	699,406	352,837,778	687,981	318,942,480	1,000	1,000	1,000	1,000	1,000
Urban Areas	2,575	38,985,427	2,316	32,475,276	110	102	94	99	95
Towns having—									
I—100,000 and over ..	38	9,674,032	35	8,211,704	27	26	22	22	22
II—50,000 to 100,000 ..	65	4,572,113	54	3,517,749	13	11	9	12	11
III—20,000 to 50,000 ..	268	8,091,288	200	5,968,794	23	19	18	17	16
IV—10,000 to 20,000 ..	543	7,449,402	451	6,220,889	21	19	20	22	19
V—5,000 to 10,000 ..	987	6,992,832	885	6,223,011	20	20	19	20	21
VI—Under 5,000 ..	674	2,205,760	691	2,333,129	6	7	6	6	6
Rural Areas	696,831	313,852,351	685,665	286,467,204	890	898	906	901	905

For reasons of economy in sorting, the available figures of internal migration are less detailed than in 1921, but the returns for twelve cities show that, out of a total population of 3,670,261, as many as 1,746,211 (1,155,543 males and 590,668 females) or 48% of the total population, were born elsewhere, the remainder being the natives of their respective cities. This, of course, does not represent the actual



accretion from countries or towns, but indicates the maximum extent to which the population of urban areas is reinforced by immigration as distinct from natural increase. It is, of course, obvious that the composition of the truly urban population is likely to differ from that of the rural population of the surrounding area. It is in the nature of things that the more varied activities of towns should attract a mixed population with less homogeneity than that of the country-side. But beyond this, there appears to be a tendency for the population of towns in general to show different characteristics from those of rural areas in certain definite directions. It is naturally to be expected that the percentage of literacy should be greater in towns, where opportunities for education are more readily available, and accordingly we find that 10% of the total literate population, and 29% of the total literate in English, is to be found in 38 cities, and the ratio of literacy to the total population is 27% in these 38 cities as against 8% in India as a whole. Figures for towns other than cities are not available but would probably much increase the ratio if they were. The corresponding percentages for literacy in English are 10·3 and 1·0%. In the case of infirmities, no separate figures for cities are available but the figures for Bengal go to indicate that those infirmities to record which an attempt is made at the Census are not worse in cities than elsewhere, since the number of insane, for instance, returned from the Rajshahi Division was 6,142 as against 4,245 returned from the Presidency Division. Census figures for infirmities are, however, notoriously unreliable and it is not safe to draw any conclusions.

39. The figures for sex and age in cities have to be considered in the light of the common practice in India by which men leave their families in their homes in villages and go to earn their living as temporary or semi-permanent workers in towns. This naturally results in an excess of males of mature age in cities and towns which is illustrated by the figures in Table I for urban and rural population, where the number of females to every 1,000 males is 815 in urban areas, and 957 in rural as compared to 941 for India as a whole. Similarly the mean age for Calcutta males is 25·8 and that for Bombay males 25·6, years as compared with 23·2 the mean age for males in India, as a whole. This condition does not however apply to the whole of India, as in Rajputana the towns have 913 females per 1,000 males compared to 907 in rural areas*. These towns are not, of course, industrial. The marginal tables show (1) the number of females in the urban population per 1,000 males for each of the main provinces, and (2) for some of the principal cities, not only the number of females per 1,000 males but also the number of married females per 1,000 married males, indicating very

Urban Sex Proportions.

Province (British) or State.	Females per 1,000 males, total population.	Females per 1,000 males, urban population.
Madras	1,025	993
Bihar and Orissa	1,005	820
Central Provinces and Berar ..	998	886
Western India States	974	995
Hyderabad State	959	932
Burma	958	681
Central India	948	864
Bengal	924	601
Rajputana	908	913
United Provinces	902	805
Bombay	901	773
Assam	900	577
Ajmer-Merwara	892	823
North West Frontier Province ..	843	642
Punjab	831	699

* For a possible explanation see para. 78.

Sixteen largest cities in order of population.

City (including cantonment).	Females per 1,000 males.	Married females per 1,000 married males.	City (including cantonment).	Females per 1,000 males.	Married females per 1,000 married males.
Calcutta	468	365	Amritsar	666	756
Bombay	554	499	Lucknow..	722	738
Madras	897	936	Karachi ..	688	679
Hyderabad ..	886	822	Howrah ..	550	447
Lahore	565	646	Cawnpore	694	731
Rangoon	477	360	Nagpur ..	848	838
Delhi	694	754	Agra ..	799	865
Ahmadabad ..	717	..	Benares ..	792	776

clearly the unnatural life of the latter sex in some of the greater cities, which in the case of the men involves of course a corresponding number of women left by them in their homes. A comparison of the 1931 figures for the provinces with those of 1921 indicates that there is nearly everywhere a considerable decrease from the 1921 ratio. The only provinces or states in which the urban female ratio shows an increase are Burma, the North West Frontier Province, Baluchistan, Travancore and Cochin, while, excepting Burma, the decrease in the major provinces has been heavy. On the other hand Bombay City which had 664 females to every 1,000 males in 1881, 586 in 1891, 617 in 1901, when the impermanent population was depleted on account of the plague, 530 in 1911 and 525 in 1921 had 554 in 1931, showing a fair increase, probably due however, as in 1901, to depletion of floating male labour, this time on account of the depression in trade. In the accompanying diagram the figures represent the total figures, including suburbs omitted in the table preceding it. In the more purely industrial towns such as those of Gujarat the ratio is much less unequal than in the cosmopolitan ports. It might be expected that decaying towns would show a rising female ratio, since such a town not only fails to attract immigrants but might be presumed to tend towards sending out male emigrants to earn an industrial living by some urban occupation elsewhere. The Census Superintendent of Bengal however has shown that the decaying towns of that province have a falling female ratio, a phenomenon often to be associated with a decline in population in other parts of the world, but not apparently in India generally. In the case of cities which include cantonments allowance must obviously be made for the fact that a disparity in the numbers of the sexes is a necessary concomitant of the concentration of troops. In the main India tables however, that is in Tables III, IV and V, cantonments have been separately shown and are not included in the figures for cities, though in the special tables for cities from Table VI onwards cantonments, etc., are generally included.

City.	Population (including suburbs, cantts., etc.)	Whole rectangle-males; blank area inside-females.	Females per 1,000 males.
Rangoon ..	400,415		477
Calcutta (with Howrah).	1,485,582		490
Bombay ..	1,161,383		554
Lahore ..	429,747		565
Delhi ..	447,442		670
Hyderabad (Deccan).	466,894		886
Madras ..	647,230		897

Race and Religion in Towns.

40. It was suggested in the Census Report for 1901 that there were possible connections between race and religion and the practice of congregating in towns.

One of the reasons given for the comparative absence of the urban habit in Bengal was the presumption that its population contained a strong mongoloid element, and it was pointed out that the inhabitants of Assam and Burma, both much more mongoloid than Bengal, were even more markedly rural. It may, however, be questioned whether race has in this case anything to do with the matter, and we should be inclined to account for the phenomenon not by race but by rainfall. The areas of the greatest precipitation in the peninsula are the Malabar Coast, Bengal, Assam and Lower Burma, and if living in cities is unpopular, as it certainly is, in these regions it is perhaps rather on account of the greater degree of discomfort which it involves than on account of the racial composition of the people. The population in at any rate two of these areas has an excessively high density, and one which easily compares with that of drier provinces of greater urbanization ; on the other hand it is spread, where it is thickest, through almost contiguous but rural habitations among coconut groves and rice fields. In northern India it is not impossible to live in a walled village or town and to move about freely on the face of the land during the greater part if not all of the year. In Eastern Bengal or Cochin the heavens are overcast and the land is awash for nearly half the year, and man or beast can only roam in or on the face of the waters, a condition which makes sanitation and evaporation very much more difficult to obtain in closely agglomerated habitations than in scattered homes each in its own demesne. On the other hand in southern India the Tamil as distinct from the Telugu, Kanarese or Malayali does appear to be predisposed towards urban life.

It was further observed in 1901, though no explanation was suggested, that towns attracted population of different religions in varying degrees, and it was pointed out that whereas in Bengal, Baluchistan, Assam and the Punjab the Muslim took less readily to town life than the Hindu, the case was reversed in most other parts of India, particularly in the United Provinces, the Central Provinces and Berar, in Hyderabad, Madras, Mysore and Rajputana. Clearly the reason has nothing to do with religion. Probably it is to be traced to historical causes, and it would appear, as might perhaps be expected, that the intrusive population is that which tends to prevail in the towns. Thus in Rajputana, Bombay, the Central and the United Provinces, and in southern India generally Hindus represent the country stock established before Islam appeared, and it is natural to find that on the land the Hindu still predominates. Conversely in Baluchistan and the North-West Frontier Province the Hindu is nowadays intrusive and we find that he tends there to congregate in cities. In the case of Burma both are intrusive, but the Muslim has shown a greater tendency to intermarry with the Burman and to settle locally, while many of the Muslims of Burma (Zerbadis and Yakaing Kalas) are more Burmese than foreign in descent. Consequently we find that the Muslim in Burma shows a greater tendency than the Hindu to leave the towns. The two provinces which at first sight appear to spoil this hypothesis are Bengal and the Punjab. Here, however, the inversion of the usual condition would seem to be due not to a breach of the rule that the intruder clings to the towns but to the fact that the country dwellers have been converted on a much larger scale than elsewhere. The Muslim of East Bengal and of the Surma Valley in Assam seems to be descended for the most part from converted inhabitants, and similarly conversion to Islam was probably imposed on the Punjab with more persistence and efficacy than in parts of India more remote from the course of Muslim invasions and added later to the Mogul dominions. Apart from this the trading classes, which are often racial or religious, naturally tend to be town dwellers, so that Parsis and Jews can hardly be found elsewhere, and Jains, who include large numbers of the Marwari and Kathiawari traders, are more urban than communities of other faiths. Thus too Sikhs who are rural at home are town dwellers elsewhere, whither they go generally as mechanics or artificers of some kind. It remains to be added that the figures of some urban communities in the Punjab may have been slightly affected by intensive propaganda aimed at bringing rustics into the towns on census night to swell if possible the numbers of one electoral community or another, and one or two similar cases occurred in the United Provinces. Where this is alleged to have taken place, however, there seems to have been little or no change in the proportions borne by the community to another.

Cities.

41. The table below gives a summary of certain information with regard to cities, that is with regard to those which have not less than 100,000 inhabitants. Their figure is moderate enough when compared with those of the west. The United

Kingdom alone is unfortunate enough to have 56 towns of over this minimum compared to India's 39, while the United States of America have at least 70, though their population is only 123 million, little more than a third of India's. The figures given in column 7 are not all strictly comparable one with another, as the definition of 'foreign born' adopted by different provinces varies. Thus in Calcutta the figure refers to those born outside Bengal, in Hyderabad and Lahore to those born outside the City but in Srinagar to those born outside the State, and in the case of eight other towns to born outside the District.

City.	Total Population.	Density.	Females per 1,000 males.	Literates per 1,000.		Numbers foreign born per 1,000.	Percentage Variation.					
				Males.	Females.		1881 to 1891.	1891 to 1901.	1901 to 1911.	1911 to 1921.	1921 to 1931.	1881 to 1931.
1	2	3	4	5	6	7	8	9	10	11	12	13
1. Calcutta with Howrah ..	1,485,582	24,354	489	430	269	328‖	+12·5	+22·9	+11·0	+4·3	+11·9	+79·2
2. Bombay	1,161,383	48,000	554	291	153	754	+6·3	—5·6	+26·2	+20·0	—1·2	+50·2
3. Madras	647,230	22,249	897	433	170	348	+11·5	+12·6	+1·8	+1·6	+22·8	+59·1
4. Hyderabad with Secunderabad, etc.	466,894	8,809	889	449	118	321	+13·0	+8·0	+12·0	—19·0	+16·0	+27·0
5. Delhi with New Delhi, Shahdara, etc.	447,442	6,835	670	246‡	89‡	483‡	+11·1	+8·3	+11·6	+30·7	47·0	+158·1
6. Lahore	429,747	10,913	565	297	124	513	+12·4	+14·8	+12·7	+23·2	+52·5	+187·7
7. Rangoon	400,415	16,146	477	512	379	351	+34·4	+30·3	+24·9	+16·6	+17·1	+198·4
8. Ahmadabad	313,789	*	853	*	*	*	+16·3	+25·3	+16·6	+26·4	+14·5	+145·9
9. Bangalore with Civil and Military Station.	306,470	11,799	902	405	168	343§	+15·7	—11·8	+19·1	+25·3	+29·0	+96·6
10. Lucknow	274,659	13,272	745	253	43	320	+4·4	—3·3	—1·6	—4·6	+14·2	+8·2
11. Amritsar	264,840	24,844	666	205	69	203	—10·0	+18·8	—6·0	+4·9	+65·3	+74·4
12. Karachi	263,565	6,720	688	286	114	520§	+43·0	+10·9	+30·2	+42·8	+21·5	+258·3
13. Poona	250,187	6,400	811	408	149	363**	+25·8	—4·5	+5·3	+23·9	+16·5	+82·6
14. Cawnpore	243,755	24,756	696	233	62	473	+24·9	+4·5	—12·0	+21·2	+12·6	+56·9
15. Agra	229,764	12,449	813	214	52	306	+5·3	+11·5	—1·4	+0·0	+23·8	+43·4
16. Nagpur	215,165	10,578	848	308	95	302	+19·0	+9·0	—21·0	+43·0	+48·0	+119·0
17. Benares	205,315	25,945	802	300	83	171	+2·2	—4·6	—4·4	—2·6	+3·5	—6·1
18. Allahabad	183,914	12,118	776	347	133	217	+9·4	—1·8	—0·2	—8·4	+17·0	+14·9
19. Madura	182,018	22,555	985	444	94	185	+18·5	+21·2	+26·6	+2·8	+31·0	+146·6
20. Srinagar	173,573	15,779	831	174	14	24§	..	+3·1	+3·0	+12·2	+22·5	+46·0¶
21. Patna	159,690	10,646	731	305	86	193	—3·2	—18·4	+1·0	—11·9	+33·1	—6·42
22. Mandalay	147,932	5,917	905	704†	390†	100§	..	—2·6	—24·8	+7·7	—0·7	—21·7¶
23. Sholapur	144,654	*	885	254†	48†	313†§	+3·4	+21·6	—18·5	+94·9	+21·0	+141·5
24. Jaipur	144,179	48,060	850	218	32	45	+11·4	+0·9	—14·4	—12·3	+19·9	+1·1
25. Bareilly	144,031	17,652	842	227	62	178	+6·7	+8·4	—2·8	—0·0	+11·3	+25·1
26. Trichinopoly	142,843	17,657	957	485	152	217	+7·3	+15·6	+17·9	—2·5	+18·6	+69·1
27. Dacca	138,518	23,086	745	444	261	75‖	+4·1	+10·0	+21·0	+10·0	+16·0	+76·8
28. Meerut	136,709	18,749	750	266	108	267	+19·9	—1·1	—1·6	+5·1	+11·5	+36·8
29. Indore	127,327	14,147	734	348	98	957	..	+4·5	—48·2	+107·1	+36·8	+53·4¶
30. Jubbulpore	124,382	7,897	796	357	109	399§	+11·0	+7·0	+11·0	+8·0	+14·0	+64·0
31. Peshawar	121,866	13,801	607	235†	67†	154†	+5·3	+13·0	+2·9	+6·7	+16·7	+52·4
32. Ajmer	119,524	7,031	811	322	95	435	+41·3	+7·3	+16·8	+31·7	+5·3	+145·2
33. Multan	119,457	9,084	754	200	33	363	+8·6	+17·2	+13·6	—14·5	+40·9	+73·9
34. Rawalpindi	119,284	9,527	570	326	64	617	+39·3	+18·8	—1·4	+16·9	+17·9	+125·2
35. Baroda	112,860	10,964	799	496	184	383	+9·3	—10·8	—4·3	—4·7	+19·2	+6·0
36. Moradabad	110,562	29,020	802	205	75	137	+5·1	+3·0	+8·0	+1·9	+33·7	+59·5
37. Tinnevelly with Palamcottah	109,068	11,314	1,098	458	108	30	+5·5	+84·1	+12·1	+11·9	+8·6	+164·8
38. Mysore	107,142	10,714	887	420	173	169§	÷22·8	+8·0	+4·7	+17·7	+27·6	+77·7
39. Salem	102,179	23,065	973	339	72	67	+33·6	+4·3	—16·2	—11·7	+95·6	+101·7

* Not available. † For municipality only. ‡ For Delhi and New Delhi Cities only. § Born outside the district in which the city lies.
‖ Born outside the province in which the city lies. ¶ 1891—1931. ** For Poona City Taluka.

Only seven of the above cities have more than 400,000 inhabitants, and these will be mentioned severally below. Of the rest it must be pointed out that the figures for Ahmadabad are more or less conjectural. That city determined on a

boycott of the census in conformity with the Congress programme and the opposition was so well organised that a complete census could not be taken. Like other cities in Gujarat it consists largely of *pōls*, that is of blind alleys tenanted by a caste community having their own outer gate which affords the only access to the individual houses in that particular block. These *pōls* shut and barred their doors on census night and defied the enumerators to enter. With the aid of police an entry was forced into many of the non-cooperating *pōls*, but even then the obstruction to and interference with the enumerators was continuous and most of the inhabitants remained out of doors in the streets, making the taking of a census impossible in many parts of the city. As it was, the census was carried out effectively in six out of 24 wards. In the other 18 wards the census was partially carried out with varying degrees of incompleteness. The total figures obtained by count were therefore much short of the total population figures given in Table IV, in which the figures formed represent a conservative estimate of the total population by sex, the actual figures obtained by enumeration appearing in Table V.

The Ahmadabad Municipality have since taken a census of their own (in July 1932), and though the result cannot be officially recognized and came too late to make possible a revision of our 1931 estimate, there is no reason to suppose that it is not substantially correct and it is certainly more likely to be accurate than the estimate adopted for the India Tables; the population figure according to the municipal census is 382,768.

42. The City of Calcutta includes the municipality of Calcutta, with the military area of Fort William, the Port and Calcutta Canal area, the two suburban municipalities of Tollygunge and South Suburban and the municipality of Howrah west of the Hugli river linked to Calcutta by a bridge that has been inadequate now for many decades. In addition to its permanent inhabitants Calcutta City contains by day a temporary population, which comes in to work and returns at night to homes outside, of not less than 26,000 (the number of season tickets in force on local railways on the night of the census) and probably of well over 30,000, for many 'buses serve the municipalities north of Howrah. One of Calcutta's wards, Muchipara, contains a population of over 80,000 and there are nine more with from over 40,000 to over 79,000 inhabitants. The average density of Calcutta municipality is 37,120 persons per square mile, and for the whole of the city east of Hugli it is 19,840, while Howrah has a density of 22,400 per square mile. In the centre of Calcutta the highest density is reached in six wards which have 112,000 per square mile or over, while there are another five with over 100,000. The increase during the decade was 11·1 per cent. in Calcutta proper, 15·2 per cent. in Howrah and 16·3 in the suburban municipalities, figures however which barely reach the half of the increase that took place between 1891 and 1901 in the case of Calcutta and Howrah. Of the city's total population of 1,485,582, 998,656 were born in Bengal; the two provinces contributing most heavily to the immigrant population are Bihar and Orissa, 264,332, and the United Provinces, 143,345, Rajputana coming next with 16,273. The latter immigrants are mainly traders with their dependants. The number of females per 1,000 males for the whole population is 490, but among immigrants taken alone there are only 236 females to every 1,000 males, and there are actually more females (361) per 1,000 males among immigrants from outside India then there are among immigrants from other Indian provinces. In every 10,000 of each sex 4,302 males are literate and 1,213 females, and the corresponding figures for literacy in English are 2,191 and 832. The population of Calcutta City includes

Calcutta.

Calcutta.	Area in acres.	Population.	Density per acre.	Variation in Population per cent. 1921 to 1931.	Variation in Population per cent. 1881 to 1931.	Variation in Density per acre. 1921 to 1931.	Variation in Density per acre. 1881 to 1931.
City of Calcutta	**46,655**	**1,485,582**	**32**	**+11·9**	**+179·2**	**+4**	**+14**
Calcutta Municipality	11,954	1,158,044	58	+9·8	+200·5	+6	+25
Fort William and Maidan.	1,283	3,083	2	+11·9	—7·7	..	—1
Port	7,040	33,702	5	+82·7	+12·3	+2	+1
Canals	270	1,905	7	+127·0	—36·6	+4	—4
Suburban	12,617	63,975	6	+16·3	+63·2	+1	+3
Tollygunge	*4,137*	*24,476*	*6*	*+13·1*	*+90·8*	*+1*	*+3*
South Suburban	*8,480*	*39,499*	*5*	*+18·4*	*+49·6*	*+1*	*+2*
Howrah	6,464	224,873	35	+15·2	+245·8	+5	+21

16,234 persons of European race, 746 Armenians, 579 Japanese and 3,046 Chinese. Of those of European race 1,256 are non-British subjects. Anglo-Indians number 18,469.

Bombay.

43. Bombay City includes the main island occupied by the town together with the four islands in the harbour, *viz.*, Cross Island, Middle Ground, Oyster Rock and Butcher Island. Its area has increased by some 415 acres since 1921, as a result of the Back Bay reclamation. The census was taken by the Executive Health Officer, under the general supervision of the Census Superintendent, in circumstances of considerable difficulty on account of the civil disobedience movement, and showed a population of 1,161,383. The Bombay-born population, which was only 16 per cent. in 1921, has gone up according to the figures of birthplace to 24·6 per cent., but there is some doubt as to whether the returns are accurate in this respect. On the other hand an increase was to be expected as a result of the absence of much of the periodic migratory population. Immigrants from Portuguese India number some 39,000, an increase of over 4,500, but Europeans have fallen from 13,544 in 1921 to 8,400 in 1931, 1,009 of whom are non-British subjects. This fall in number is largely but not entirely attributable to a reduction in the number of British troops. A very high proportion of the Bombay population, 20·4 per cent., is drawn from the Ratnagiri District farther down the coast. As in other cities—Rangoon for instance—there is a disproportionate number of persons in the age groups from 20 to 40, and the female ratio, though higher than at any census since 1901, is excessively low, being only 554 females to every 1,000 males, though the ratio in the city-born population is 728. The percentage of literacy has increased from 23 to 24 only, but that of literacy in English from 8 to 11·6. The only industry conducted on any large scale in Bombay is that of cotton textiles; shipping, including both owners and employed, brokers, mariners, boatmen, etc., only accounts for 25 per mille of the total following occupations of all classes. The mean density of the Town and Island in 1931 was 48,000 persons per square mile, a decrease on the density figure of 1921, probably to be accounted for by the absence in certain areas of the floating cold weather population owing to the trade depression. In most parts of the city, however, the density is very much greater than the mean figure. In the Kamathipura quarter it is 385,280 per square mile, in Nagpada II it is 407,040 and in the Kumbharwada quarter 465,280 persons per square mile. At least 36 per cent. of the population of the city suffer from gross overcrowding. Of all tenements 81 per cent. are one-roomed and the average number of persons to each of those rooms is 4·01, but that gives little notion of the congestion at its worst, for 256,379 persons live in rooms occupied by 6 to 9 persons each, 80,133 in rooms of 10 to 19 persons each and 15,490 in rooms occupied by 20 or more persons to each room. These alone comprise between them 30 per cent. of the city's population, and it can hardly be imagined that all those living at the density of less than 6 to one room are free from overcrowding, and 74 per cent. of the city's population—close on 800,000 persons that is, live in one-roomed tenements. Byculla, Sewri, Mazagaon, Parel and Nagpada II are the worst quarters, and 99 per cent. of Byculla's population live in one-roomed tenements; in Mazagaon, where 88 per cent. live thus, the average number per room is 4·95. For the vast majority of Bombay's population the available floor space per head is about six foot square, and while very few of Bombay's population live in tenements of as many as three rooms "there is greater pressure on the floor space of three-roomed tenements than there is on the floor space of one-roomed tenements in London". Bombay is, therefore, to be congratulated that her population has at any rate fallen by 1·2 per cent. since 1921; probably the missing population is to be congratulated likewise.

Figures of housing congestion in Bombay City.

Number of rooms per tenement.	Number of tenements.	Per cent.	Number of occupants.	Per cent. of population.	Average per room.
1 room ..	197,516	81	791,762	74	4·01
2 rooms ..	26,231	11	131,872	12	2·51
3 rooms ..	7,416	3	44,821	4	2·01
4 rooms ..	6,169	2	42,013	4	1·70
5 rooms ..	2,953	1	22,302	2	1·50
6 and over	3,836	2	39,199	4	..

Madras.

44. The growth of the third presidency town has in the past been very much slower than that of Calcutta or Bombay. There was some growth between 1881 and 1901 after which the population increased little during the next two decades.

The last decade however has shown almost double any previous recorded decennial increase. This amounted to 22·8% as compared to 1·6 and 1·8 during the previous decade and the one before that respectively. Industrial development has been marked and the tariffs have enabled the creation of pencil, match and tobacco factories, *biris* being made and exported in some quantity. Communications within the city have been much improved and an extension to the south-west has added a populous and growing suburb of the garden-city type. Nevertheless Madras still has a higher number of persons per occupied house than any other town in the presidency, having 877 persons per 100 occupied census houses, a congestion on one aspect of which the Census Superintendent is quoted in paragraph 51 below. The actual state of congestion varies much between the true city area and the residential suburbs. Two-fifths of Madras' wards have 64,000 persons to the square mile.

Hyderabad.

45. Hyderabad City, the capital of H. E. H. the Nizam's Dominions, covers an area of some 53 to 54 sq. miles and includes not only the city proper but its suburbs, the Hyderabad Cantonment, the Residency area and the Secunderabad Cantonment with Bolarum and Trimulgherry. The area occupied has doubled since 1901 but the population is now little more than it was at that census, although it was returned as over half a million in 1911. The mean density is 8,809 to the square mile, but rises to 9,956 for the total area within the walled city, while the various wards and suburbs vary from 3,692 persons per sq. mile in the *Berun* ward VII to 65,141 in the *Andarun* ward IV, the three other *Andarun* wards varying from 22,623 per sq. mile to just over 38,000. It may be added that the density of *Andarun* ward IV appears to have decreased by 47% since 1901. The activities of the City Improvement Board and the demand for large buildings for Government offices, colleges, etc., are reported to be causing a great shortage of house accommodation in the city *Andarun*, which is leading to a gradual movement of population from the walled city to the suburbs. During the decade plague has been recurrent in most winters, radiating "from the congested grain markets to the outskirts of the City; cholera, small-pox and the perennial malaria were additional causes of ill-health". The city Improvement Board has cleared away part of the "crowded and insanitary slums" opening out fresh suburban sites on which—

"new roads were laid out, drains constructed and rat-proof houses built and rented to some of the poor who were dishoused. The well-to-do have moved out into the open country round about the City and built houses for themselves. Government very generously advanced loans to its officers for building houses. Thus the City has expanded in area, the continuity of houses in some directions reaching distant villages of certain adjacent taluks. Extension of roads to the new areas, facilitating motor service and improvement of suburban railway communications, have not only brought distant mohallas within easy reach of city dwellers but also helped them to develop urban characteristics. Drainage for carrying sewage and storm water has been laid and numerous disused wells which bred mosquitoes closed down. The health of the City has thereby much improved."

Delhi.

46. Delhi's period of growth starts from 1911 when it became the Capital of India. As a City it must be held to include Old Delhi City and the Notified Area adjoining it, New Delhi, the New Delhi Cantonment and the suburb of Shahdara. The latter suburb is across the Jamna, but is hardly more cut off from the two main urban areas than is the Cantonment, and houses a considerable number of persons whose daily employment is in Delhi proper. The population varies very greatly between winter and summer, and the census was taken when the population was almost at the maximum. An idea of the extent of the seasonal fluctuation in numbers is given by the marginal figures, though there is some change also in those of the Fort and Cantonment and probably too of Shahdara. The congestion in Old Delhi Municipality to which reference has already been made in paragraph 19 (Chapter I) is to some extent relieved during the summer by the migration of appreciable numbers of the inhabitants of the Old Town to the empty quarters in New Delhi whose occupants have moved up to Simla for the hot weather or returned to their homes in other parts of India. The excessive density of Old Delhi Municipality (58,273 persons per sq. mile) has been mentioned; that of New

Delhi.	Winter Population.	Approximate Summer population.
Old Delhi Municipality	347,500	300,000
Old Delhi Notified Area	16,300	10,000
New Delhi	64,900	30,000

Delhi is 1,524 per sq. mile and of Shahdara 6,120. Taking the whole of the city there are 454 persons to every 100 census houses, but this number rises to 473 in Old Delhi Municipality and to 629 in its Churi Walan ward, while the Qarol Bagh ward has 605 and the lowest average is 399 per 100 houses in the Lothian Road ward. Generally speaking the overcrowding is by no means as bad as that in many other cities of India, but partly perhaps as the result of an inadequate water supply the death-rate in a heat wave is serious. The population of Delhi City as a whole has nearly doubled since 1911.

Lahore.

47. The City of Lahore, the capital of the Punjab, includes a municipality and a cantonment covering together an area of over 39 sq. miles and containing a population which has increased by 52·5 per cent. since 1921 and now amounts to 429,747, of which slightly over 400,000 occupy the old walled city and the town and civil station outside it. Inside the walled city there are 176,792 persons living at a density of 198,500 per sq. mile. The increase in population during the last decade has naturally taken place outside the walls, and a chain of dwellings now links the civil station to the cantonment. More than half the inhabitants were born outside the city, and nearly half were born outside Lahore district. Growth has been very rapid since 1881 (187·7%).

Rangoon.

48. The City of Rangoon includes both municipal and cantonment areas and the Port of Rangoon part of which is outside the former. The population has increased from 341,962 in 1921 to 400,415, but part of this increase is due to the extension of the city limits, and the increase since 1921 on the whole area now included is 15·9 per cent. If the adventitious population numbering 22,317 at this census, and including the floating population of the port, inmates of jail, etc., be excluded at both censuses, the decennial increase becomes 17·7 per cent. The density of the city is 16,146 persons to the square mile. The population is largely immigrant with a consequent disproportion in the numbers living at age groups 20 to 40 and in the ratio of females to males. Thus of the Telugus in Rangoon, mostly unskilled labourers, two-thirds are found in age groups 20 to 40, and there are only 20 females per 100 males, an inequality of ratio still more pronounced among Oriyas with 7 and Chittagonians with 2 females to every 100 males. Of every 1,000 persons in Rangoon 509 come from outside Burma of whom more than 450 are Indians, while the total Indian population is 532 per 1,000. Seven and a half per cent. are Chinese and about 4 per cent. European or Anglo-Indian. Nearly one half (496 per mille) were actually born either in India or China and little over a third (351 per mille) in Rangoon itself. Of males alone 633 per mille were born outside Burma, while in the case of females on the other hand 750 per mille were Burma-born. Owing to the small proportion of females to males for the whole population the deaths exceed the births by an amount, according to the vital statistics, of about 46,000, so that the increase of 55,000 during the decade implies an immigration figure of 100,000 during the same period, if the vital statistics can be trusted. The total female ratio has however been rising, being now 48 per 100 males compared to 41 in 1911, and the proportion of foreign born has fallen from 583 per mille in 1911 to the present figure of 509.

Population of Rangoon.

Race.	Numbers.	Females per 100 males.
Burmese	121,998	100
Karens	3,226	100
Other indigenous	2,358	80
Indo-Burmese	12,560	105
Indians	212,929	24
Chinese	30,626	54
Anglo-Indians	9,977	97
Europeans	4,426	53
Others	2,315	71
Total	400,415	48

Rural Population.

49. The distribution between a town and a village however arbitrary is easily effected on a numerical basis, but the definition of the village as a unit is by no means always so easy. As has already been indicated, the thickly populated parts of the Malabar Coast and of Bengal are often occupied by a series of homesteads, which may be grouped in villages for administrative purposes but which do not thereby acquire any of the characteristics of the compact determinate village of Upper India, leaving it difficult to say where one village ends and another begins. The *mauza*, on the other hand, which is the revenue unit, is rather administrative than geographical and may consist of quite separate hamlets or even contain no houses at all. In the hills the conditions are generally the reverse of those

in the plains ; that is, where the population is thickest it is found in concentrated villages, as on the N. E. Frontier, whereas when very thin it seems to be spread about in isolated homesteads or scattered hamlets as in the Simla Hills. In Baluchistan, where a large proportion of the population is still more or less migratory, villages are becoming more scattered as the need for defence ceases to be felt. This indeterminate nature of the village unit, which may be a definite residential site, walled or palisaded, or may be an administrative unit containing several residential villages or a number of scattered houses, impairs the significance of the figures of the population as distributed in villages of various sizes. Population, for instance, shown as residing in a village of 2,000 to 5,000 persons may really be the population of a *mauza* containing several small residential villages of less than 500 persons each, whereas a number of villages of less than 500 may really be contiguous hamlets of scattered houses that might just as well be shown as one large village. Generally speaking, however, it may be said that of the total population of India 89 per cent is rural, more than half lives in villages with a population of under 1,000 and nearly one-third (27·6 per cent) lives in villages with a population of under 500 persons.

Houses and Families.

50. Ambiguity has characterised the terms, 'town' and 'village' and it attaches again to the term 'house'. The term 'house' in India covers the greatest diversity of dwellings. The portable screens of bamboo matting carried on a gipsy's ass, or the camel-borne tent of a Bugti nomad are less primitive than the mere foliage wind screens of some of the Andamanese but still hardly conforming to the usual conception of a dwelling-house, though this term can fairly be applied to the conical grass huts of the Chenchu and the Bhil and still more to the thatched and matwalled dwellings, often on piles or in trees, erected in the hills alike of Assam and of Travancore. In Bengal the thatched roof is hogbacked to increase the resistance of the gables to the rooflifting cyclone, while on the west coast the typical Nayar house has picturesquely cocked gables on a very steeply pitched tiled roof the better to resist the torrential rain. Indeed the houses of the well-to-do in Malabar are built round an open *impluvium* on to which a pillared verandah opens giving access to all the rooms, one of which is reserved as in an ancient Roman house for the *lares* and *penates*. In Upper India on the other hand, the mud wall and flat roof of a dry climate prevail, while the rich surround their houses of brick or stone with a walled enclosure and ensure privacy by the greatest economy in windows. Almost everywhere the tendency is apparent towards the replacement of traditional roofing materials by corrugated iron sheeting as ugly as ubiquitous.

If the house may vary from the *chawl* dwelling of a large town to a sprawling *bari* in the country, so too the family is a difficult unit to define in correspondence to the house. Apart from the collective houses of some of the hill tribes which accommodate all the bachelors or spinsters of the village, a Bengal *bari* may house a joint family of several married couples in contrast for instance to the Assam hill custom whereby the elder sons, or in some tribes the elder daughters, set up new houses for themselves or, as in other cases, turn their parents out of the ancestral home to build a house for themselves elsewhere. It was therefore necessary to define the house for census purposes, since a house is far from being a constant unit ; and generally speaking a census house meant the buildings, several, one, or part of one, inhabited by one family, that is by a number of persons living and eating together in one mess with their resident dependants and their servants residing in the house. Even this wide definition proved difficult to apply universally, as it is defeated by the Santal, for instance, whose married sons have entirely separate establishments but resort to their father's house for meals. In the case of town houses it was generally provided that the house for census purposes should be taken as any part of an inhabited building with a separate entrance, which is in practical conformity with the definition of a house given above. The marginal table gives the number of persons per house and houses per sq. mile in India at successive censuses. Figures for the provinces and states are given in subsidiary table VI at the end of

Census.	Persons per house.	Houses per sq. mile.
1881	5·8	31·7
1891	5·4	33·9
1901	5·2	31·6
1911	4·9	35·8
1921	4·9	36·1
1931	5·0	39·3

chapter I. The comparability of the figures of different censuses is to some extent vitiated by changes in the definition of a house, as the structural definition adopted in 1872 has gradually given way to the social one given above, but has not yet been uniformly accepted or rejected by all provinces and states.

Pressure of Population upon Housing.

51. It has already been indicated that city dwelling is not generally congenial to the Indian, and indeed since India is primarily an agricultural country it could hardly be expected that a high proportion of its population would be found in towns. The Census Superintendent for Mysore State quotes a Kanarese proverb "after ruin go to the city", which is sufficiently expressive of the general disposition towards a town life, though it is somewhat typical of the Gujarati and of the Tamil to show a greater inclination towards a town life than most Indian races. It is however to the general absence of such an inclination and to the general absence of industrial activity that the slow growth of urbanization is to be imputed. There are only 39 cities of over 100,000 inhabitants in the whole of the Indian Empire, and the general growth of the urban population has been 20%, while 10% has been that of the rural, although the city of Bombay has actually decreased in population during the decade. On the other hand there has been a very rapid growth in some towns. While Calcutta has increased by 12 per cent., Rangoon by 17 per cent., Madras by 23 per cent., Karachi by 23 per cent. and several other cities by 20 per cent. or a little over, Patna has increased by 33 per cent., Delhi City by 40 per cent., Bangalore City by 45 per cent., Nagpur by 48 per cent., Lahore by 53 per cent. Amritsar by 65 per cent. and Salem by 96 per cent.* The number of occupied houses has not generally increased in proportion to the population though that is not to say that it has not increased proportionately to the number of families, since much of the increase must have been counted in children, while in some cases, *e.g.*, Bangalore Civil and Military Station, houses have increased at a greater rate than the population. At the same time there is very serious congestion in many towns, and the density of urban population is in some cases almost as excessive by western standards as is the density of rural population in the more fertile areas. Thus the density of Belfast County Borough is 17,984 persons per square mile (1926) and the average density of a London County Borough (1931) is 37,568 persons to the square mile, a density which reaches its maximum in Southwark with 97,088 to the square mile. Leith (1931) has 35,000 persons per square mile and the Govan ward of Glasgow, its most densely populated in 1931, has 36,230. With these figures we may compare, the densities of Lahore with 10,913 persons to the square mile, of Peshawar City with 22,830 and of Calcutta with 36,265; while half a dozen towns in the United Provinces, including the city of Moradabad, show a municipal density of from 40,000 to 45,000, Bombay has 48,000, Delhi City (Municipality) has 58,273, and Sikandrabad, a small town in the United Provinces, has 63,552 persons per square mile. But if smaller units be taken the densities found are much higher. Two-fifths of the wards of Madras show a density of 64,000 persons to the square mile; two-thirds of Madura's wards show a density of 64,000 and one ward that of 125,000; three wards of Peshawar have densities of 121,600, 131,840 and 188,800 per sq. mile respectively; the old walled city of Lahore contains a population of 177,000 persons living at a density of 198,500 per square mile, and although nine-tenths of Lucknow shows a density of under 32,000, parts of the Yahiaganj ward of that town have a density of 423,000 to the square mile. The Kumbharwada quarter of Bombay has 465,280 persons to the square mile. In Cawnpore there is a substantial area with a density of over 100,000 and in Chak No. 95 Talaq Mahal of Anwarganj ward in that city the density of 786,560 persons per square mile is reached.

It is necessary in this connection to consider the size of families and the extent to which they are crowded into single rooms. It must not be forgotten that houses of more than two storeys are probably rather the exception than the rule in Indian urban areas, while even in towns one-storied houses are perhaps even more plentiful than those of two. Thus of the total number of 24,579 structures in Baroda City 10,653 had one storey only, and those with more than two storeys numbered only 3,699, while of the houses in Bombay three in five have only one storey, and in Karachi 77·6%. The definition of a house must likewise be borne in mind, and this in urban areas generally depended on the existence of a separate entrance rather

* In both 1911 and 1921 plague had caused an exodus from Salem.

than of a separate building. The average size of a family is a third important factor. This works out in Lucknow for instance at 4·6 persons but over 14 per cent. of families were found to have 8 or more members. In Travancore the average number of persons in a household is 5·5 and in Rajputana it is 4·7. In Cawnpore the average family consists of 3·5 only, but that is due to the presence of large numbers of industrial workers who leave their wives and children at their homes in villages. Industrial workers form a very small minority of the urban population, and it seems that taking India as a whole the average family contains from four to five individuals. When therefore it is seen that in Delhi, for instance, the average number of persons per 1,000 houses varies according to the ward from 399 to 629 it seems likely that most families get a census house to themselves. Madras on the other hand has 877 persons per 100 houses, Rajahmundry 793, Mangalore 727, Madura 723, Vellore 709 and three more towns more than the maximum average of any ward in Delhi. It is not possible that these figures should represent a distribution of a house per family. Of Madras itself, however, the Census Superintendent writes as follows :—

"A marked feature of Madras is the street-dweller and squatter. A midnight tour of the central and northern parts of the town any fine night would disclose sleeping persons on every sidewalk. These persons are not all tramps by any means; the majority indeed are ordinary citizens in everything but the possession of a roof. Such a possession has no great inducement for a population of floating labour in a mild and pleasant climate, in a city where houses are scarce and rents often exorbitant. The figure for Madras may be indicative of a higher number of persons per dwelling than is desirable but before it could be taken as an accurate guide, the street-dwellers and squatters would have to be deducted from the total population used in striking the average. Madura's figure involves to some extent a similar qualification, for to this sacred city of the south wanderers resort in large numbers throughout the year".

It would be unsafe however to regard this factor as operative in the case of the other towns mentioned, though it is undoubtedly indicative of one factor which distinguishes overcrowding in the east from that in Britain, that is the greater extent to which an open-air life is possible, since weather conditions which compel retreat within doors are very much less prevalent. In Bombay the overcrowding is so great that men have to sleep out wherever possible, and in the monsoon, when the pavement is impossible, verandahs, alley-ways and stairs are all crowded with slumberers.

We have now to return to the census house. This is normally the dwelling of a commensal family, and in towns is usually determined by the existence of a separate entrance, but it very often implies no more than a single room like one of the small compartments provided for servants in the compounds of larger houses. The small size of such rooms may be judged from the density of the population when considered with the absence of lofty houses. A one-roomed tenement in Bombay normally varies from about 10×10 feet to about 12×15 feet, and the average per room is more than four persons, who have therefore each on the average from 5 to 7 square feet of floor space, but in the most congested areas the available space per person is far less than this; and the following is quoted, with regard to the housing congestion in the Kolar Gold Field, from the Mysore State Census Report :—

Overcrowding in Bombay City.

Number of persons in seven wards living			Percentage of total population living 6 and over per room.
6–9 per room.	10–19 per room.	20 and over per room.	
256,300	79,000	15,500	26·4

"The standard size of a single room hut is, generally speaking, 9 feet by 9 feet except in Mysore Mine lines where it is 12 feet by 9 feet. In Balaghat, it is 10 feet by 9 feet ..... There is a good deal of overcrowding. The following table gives some idea of its extent.

Total number of huts.	One family.	Two families.	Three families.	Less than four persons.	4 to 6 persons.	6 to 8 persons.	8 to 10 persons.	More than 10 persons.
Single room huts, 6,827	6,591	235	1	3,440	3,522	749	106	10
Single room huts with kitchen or verandah, 1,850	1,734	110	6	582	668	461	107	32

It will be seen that there is one instance of three families occupying a single hut and 235 cases of two families living in one hut. One hundred and twenty-five of these huts are the 9 feet ones and the remainder

12 feet by 9 feet. In 42 cases, families of more than ten persons live in one hut with or without kitchen; over 850 single-room huts are occupied by six or more persons per hut".

Matters are even worse elsewhere. Thus the Census Superintendent for the United Provinces :—

"In Lucknow Municipality no less than 670 families of 8 persons or over are living each family in a single room, and..... a further 1,931 families of this size live each in 2 rooms. The corresponding figures for Cawnpore are 323 and 552 respectively. In the margin are given for Lucknow and Cawnpore the distribution of families according to the number of rooms they occupy. The commonest unit of occupation is one room, half the families in Lucknow and nearly two-thirds the families in Cawnpore falling into this group. In Lucknow 90 per cent. of families live in 3 rooms or less, and in Cawnpore this figure reaches 95 per cent".

Municipality.	Percentage of families who live in—				
	1 room.	2 rooms.	3 rooms.	4 rooms.	5 or more rooms.
Lucknow . .	50·4	28·9	10·7	5·2	4·8
Cawnpore .. .	62·5	24·8	7·5	2·9	2·3

City.	Percentage of families occupying tenements of—				
	1 room.	2 rooms.	3 rooms.	4 rooms.	5 or more rooms.
Baroda . .	24·1	27·8	10·6	14·6	22·9

Percentage of families in London administrative county occupying				
1 room.	2 rooms.	3 rooms.	4 rooms.	5 or more rooms.
12·2	21·5	25·1	18·4	22·8

Bombay, as we have seen (paragraph 43 above), is far worse still, but Baroda is decidedly better as the marginal figures show. With these figures we may compare the number of rooms occupied by families in the County of London in 1931 figures of which are given in the marginal table. The average family in this case is composed of 3·5 persons, the same size as that of Cawnpore.

By way of contrast to conditions in Bombay, Lucknow and Cawnpore the account of Jamshedpur given by the Census Superintendent for Bihar and Orissa is worth quoting :—

"The industrial city of Jamshedpur is quite unlike any other city or town in the province—or indeed in the whole of India ..... To all intents and purposes Jamshedpur is a proprietary town of the Company, owned and administered by them, and its people enjoy the benefits of this highly efficient municipal government without paying any rates whatsoever. The town is administered through a Board of Works, consisting of representatives of the Steel Company and subsidiary companies, with two members of the general public: and the funds required for maintaining the municipal services, such as roads, water-supply, sewage, street lights, hospitals, schools, etc., are contributed by these companies in fixed proportions about Rs. 40,000 by the subsidiary concerns and the rest by Tata's..... Among the more important developments of the last ten years, brief mention may be made of the following. The *pukka* quarters built by the Company for its employees have doubled in number, from 2,756 to 5,483, while the houses and huts constructed by the employees and others have increased from 400 to 8,150. The supply of filtered domestic water is three times as great as it was in 1921, and there are now 60 miles of water-mains and 56 miles of drainage sewers. Provision for medical relief has been extended and improved, and in the main hospital there is at present accommodation for 140 indoor patients as against 42 at the beginning of the decade. In addition to the formerly existing high school and primary schools, three middle English schools and 22 other schools have been opened ..... Since the previous census was taken, the population of Jamshedpur has grown from 57,360 to 83,738—an increase of no less than 46 per cent.....This city furnishes a striking contrast to other urban units of the province. There is no congestion in Jamshedpur, and special care is taken to prevent the growth of slums and unhygienic bazars. Although the number of houses has increased by 100 per cent. since 1921, there are still less than 1,000 houses per square mile, whereas in the other three cities the average is over 2,000. And .....the number of persons occupying each house is exceptionally low in Jamshedpur".

This however is a solitary case and though there are Improvement Trusts in the larger cities they have much to do before they can do away with congestion. Moreover India differs from Europe in that conditions of overcrowding are

probably as bad or worse in villages. The marginal figures for England and Wales in 1921 indicate the difference between urban and rural conditions in the matter of overcrowding in Britain. Northern Ireland, a poorer country, shows rather different figures, but in India "if village densities were calculated on the area of the inhabited site or sites, and not on that of the site *plus* the village lands, they would generally be greater than that of any town". This from the United Provinces report, but the Census Superintendent for Madras says just the same:—

England and Wales, 1921.	Percentage of families occupying				
	1 room.	2 rooms.	3 rooms.	4 rooms.	5 rooms or more.
Urban . .	6·2	13·6	17·7	22·7	39·8
Rural . . .	0·7	6·2	13·3	26·8	53·0

Northern Ireland, 1926.	1 room.	2 rooms.	3 rooms.	4 rooms.	5 rooms or more.
Urban . .	3·1	9·0	12·6	36·9	38·4
Rural . . .	2·3	21·2	24·1	22·3	30·1

"It is by no means sure however that the worst specimens of housing in the presidency do not come from certain rural areas, notably the wealthy delta tracts on the circars coast and in Tanjore. Where land is dear, housing tends to be bad and land fetches a notable value in delta districts where irrigation is assured. Every foot of ground is grudged to the village-site and even a comparatively well-to-do landowner will exist in an almost squalor that surprises the stranger. If this is so with an actual owner of land it can be imagined what is the condition of the farm labourer who in many cases also belongs to the so-called depressed classes. In Tanjore, these last form the backbone of the agricultural labouring population and are even yet little removed from a state of agrestic serfdom. One of the most commendable and valuable activities of the Madras Labour Department during the decade has been the compulsory acquisition of sites on which houses could be built for these people and they be introduced to something approaching decent conditions of livelihood..... In every country poverty and bad housing go together. This is so in India but a further element enters by the presence of the depressed classes. These people are forced in the villages and often even in towns to live in a hamlet apart. Its site is rarely the most attractive and space is grudged. Little interest is taken in the community and its habitat is rarely visited. A lack of public spirit or ordinary hopefulness is an almost inevitable consequence of such treatment and this added to the other elements tending to produce squalor has the result that the 'paracheris' of this presidency may safely be counted upon to produce its worst examples of housing".

SUBSIDIARY TABLE I.

Distribution of the Population between Towns and Villages.

Province, State or Agency.	Average Population per		Number per mille residing in:		Number per mille of urban population residing in towns with a population of—				Number per mille of rural population residing in villages with a population of—			
	Town.	Village.	Towns.	Villages.	20,000 and over.	10,000 to 20,000	5,000 to 10,000	Under 5,000	5,000 and over.	2,000 to 5,000	500 to 5,000	Under 500.
1	2	3	4	5	6	7	8	9	10	11	12	13
INDIA ..	**15,140**	**450·4**	**110·5**	**889·5**	**573**	**191**	**179**	**57**	**17**	**123**	**443**	**417**
Provinces ..	**17,466·3**	**484·4**	**109·3**	**890·7**	**618**	**185**	**159**	**38**	**24**	**144**	**485**	**347**
Ajmer-Merwara	36,039·8	508·8	321·6	678·4	939	..	40	21	..	217	482	301
Andaman and Nicobar Islands.	..	123·3	..	1000·0	..	..	..	..	..	135	348	517
Assam	8,218·3	255·8	26·6	973·4	280	289	284	147	2	37	389	572
Baluchistan	7,668·8	260·7	198·5	801·5	655	..	104	241	57	86	419	438
Bengal	26,506	536·0	73·5	926·5	736	171	74	19	49	208	472	271
Bihar and Orissa ..	21,203·0	431·9	43·9	956·1	631	223	143	3	13	70	425	492
Bombay†	22,906·0	637·4	224	776	686	150	145	19	33	189	561	217
Burma	16,522·1	405·9	103·6	896·4	594	147	221	38	10	164	603	223
Central Provinces and Berar	15,075·6	347·6	108·9	891·1	483	268	230	19	2	55	412	531
Coorg	4,913·5	406·1	60·2	939·8	..	..	610	390	..	..	561	438
Delhi	74,573·7	615	703·3	296·7	922	36	42	..	28	120	595	257
Madras	18,639	784·7	135·6	864·4	574	247	173	6	79	328	469	124
North West Frontier Province (*Districts and Administered Territories*).	14,302·9	720·5	159·2	840·8	607	131	249	13	49	292	479	180
Punjab	15,414·4	592·4	130·1	869·9	618	152	183	47	39	167	531	263
United Provinces of Agra and Oudh.	12,300·7	406·9	112·1	887·9	550	167	171	112	6	90	528	376
States and Agencies ..	**10,628·3**	**364·5**	**114·5**	**885·4**	**431**	**210**	**243**	**116**	**10**	**91**	**412**	**487**
Assam States*	85,804	183·7	140·9	859·1	1,000	..	..	..	16	36	436	512
Baluchistan States ..	2,115·4	190·0	26·1	973·9	..	..	..	1,000	..	64	312	624
Baroda State	10,460·1	657·5	214·1	785·9	391	240	273	96	5	206	580	209
Bengal States	5,522	206·4	28·4	971·6	..	429	347	224	27	47	394	532
Bihar and Orissa States ..	6,530·7	237·7	9·8	990·2	..	..	927	73	..	32	265	703
Bombay States	7,499·5	436·9	135·9	864·1	260	196	333	211	18	154	506	322
Central India Agency ..	12,101·3	256·1	102·2	897·8	448	227	236	89	..	57	353	590
Central Provinces States ..	7,506·5	268·8	30·2	969·8	..	519	345	136	..	21	336	643
Gwalior State	9,193·2	288·2	112·2	887·8	391	205	235	169	..	56	398	546
Hyderabad State ..	11,977·6	590·8	112	888	438	212	266	84	79	328	469	124
Jammu and Kashmir State	8,777·3	371·1	93·9	906·1	620	63	81	236	9	71	501	419
Madras States Agency ..	12,137·8	1,256·0	124	876·0	497	237	190	76	§	§	§	§
Cochin State	*17,195*	*3,671·6*	*171·2*	*828·8*	*591*	*264*	*145*	..	*441*	*462*	*95*	*2*
Travancore State ..	*11,995·4*	*1,154·5*	*108·3*	*891·7*	*482*	*241*	*185*	*92*	*111*	*373*	*447*	*69*
Other Madras States ..	*7,216·5*	*743·8*	*175·0*	*825*	*363*	*134*	*337*	*166*	§	§	§	§
Mysore State	9,676·3	334·4	159·4	840·6	519	89	189	203	1	45	460	494
North West Frontier Province (*Agencies and Tribal Areas.*)	..	‡	..	1,000	..	..	..	..	‡	‡	‡	‡
Punjab States	3,633·5	162·2	33·2	966·8	..	..	353	647	..	118	403	479
Punjab States Agency ..	10,219·8	299·8	98·3	901·7	371	302	260	67	11	163	422	404
Rajputana Agency ..	10,733·1	287·0	138·6	861·4	366	239	286	109	3	87	416	494
Sikkim State	..	299·2	..	1,000	..	..	..	..	..	..	330	670
United Provinces States ..	14,015·3	201·4	104·6	895·4	588	99	222	91	..	34	309	657
Western India States Agency	13,390·5	479·6	221	779	472	288	199	41	9	121	527	343

NOTE.—Part of Shillong Town lying in Khasi States has been treated here as lying in British Territory.

* Figures in columns 10—13 relate to Manipur only.

† Excluding Aden.

‡ Figures not available.

§ Included in the British Territory.

SUBSIDIARY TABLE II.

Number per mille of each main religion who live in Towns.

Province, State or Agency.	Number per mille who live in towns.					
	All religions.	Hindu.	Jain.	Zoroastrian.	Muslim.	Christian.
1	2	3	4	5	6	7
INDIA	**111**	**105**	**346**	**891**	**135**	**202**
Provinces	**109**	**106**	**373**	**905**	**121**	**246**
Ajmer-Merwara	322	260	333	997	555	893
Andaman and Nicobar Islands ..	..	..	..	..	..	..
Assam	25	31	334	857	19	17
Baluchistan	199	806	1,000	1,000	107	983
Bengal	74	118	616	888	37	424
Bihar and Orissa	44	40	496	938	88	87
Bombay*	222	203	322	906	249	594
Burma	104	541	831	962	327	217
Central Provinces and Berar ..	109	99	321	934	452	580
Coorg	60	44	602	1,000	178	248
Delhi	703	612	857	1,000	870	655
Madras	136	124	229	957	253	209
North-West Frontier Province .. (*Districts and Administered Territories.*)	159	651	..	1,000	115	934
Punjab	130	178	613	936	122	158
United Provinces of Agra & Oudh	112	79	458	964	289	388
States and Agencies	**118**	**101**	**331**	**782**	**224**	**133**
Assam States	164	318	844	1,000	105	105
Baluchistan States	26	90	..	..	24	933
Baroda State	214	191	421	812	444	372
Bengal States	28	35	711	..	14	21
Bihar and Orissa States	10	11	3	..	65	3
Bombay States	136	123	228	264	239	288
Central India Agency	102	80	363	944	475	651
Central Provinces States ..	30	36	495	882	257	27
Gwalior State	112	87	377	933	446	624
Hyderabad State	112	86	285	852	335	173
Jammu and Kashmir State ..	94	135	995	800	83	564
Madras States Agency	124	124	996	938	202	104
Cochin State	*171*	*145*	*995*	*1,000*	*210*	*220*
Travancore State	*108*	*113*	*1,000*	*923*	*191*	*81*
Other Madras States ..	*175*	*170*	*1,000*	..	*327*	*83*
Mysore State	159	133	252	976	427	734
North-West Frontier Province .. (*Agencies and Tribal Areas.*)	..	..	..	..	..	..
Punjab States	33	20	507	..	150	44
Punjab States Agency	98	102	488	773	123	252
Rajputana Agency	139	112	308	906	358	572
Sikkim State	..	..	..	..	..	..
United Provinces States ..	105	47	579	..	322	47
Western India States Agency ..	221	174	375	944	442	862

* Excluding Aden.

SUBSIDIARY TABLE III.

Towns classified by Population.

Towns containing a population of:—	India.		Provinces.		States.	
	Number.	Population.	Number.	Population.	Number.	Population.
Total Urban Population ..	**2,575**	**38,985,427**	**1,699**	**29,675,161**	**876**	**9,310,266**
I. 100,000 and over ..	38	9,674,032	29	8,238,808	9	1,435,224
II. 50,000 to 100,000 ..	65	4,572,113	51	3,539,057	14	1,033,056
III. 20,000 to 50,000 ..	268	8,091,288	216	6,551,109	52	1,540,179
IV. 10,000 to 20,000 ..	543	7,449,402	395	5,490,846	148	1,958,556
V. 5,000 to 10,000 ..	987	6,992,832	656	4,733,686	331	2,259,146
VI. Under 5,000 ..	674	2,205,760	352	1,121,655	322	1,084,105

CHAPTER III.

Birth-place and Migration.

Reference to Tables.

52. The first two parts of Table VI, in part ii of this volume, gives details by provinces, states and cities of the number of persons enumerated distributed by their birth-place, and the second part of the same table gives figures of the balance of internal migration. Figures, in so far as they are available in detail, of Indians overseas will be found in the appendix to the same part together with such information as is available of Indians on the high seas at the time the census was taken.

Figures of migration.

53. The figures of migration are generally speaking not of very great importance as affecting the population of the different parts of India, as the fact that the principal occupation of all of India is agriculture militates against any marked movement of population from one part to another. Where the migration figures are high it is generally in the case of small units. Thus Delhi has 41% of immigrants and Ajmer-Merwara 19, while in Ajmer city itself there are nearly as many immigrants as there are native born. In both these cases the migration is the natural result of a movement of labour towards an urban unit, the high rate shown by Delhi being the result of its new growth as a capital city. Two other provinces show a high immigration balance, Assam with 16% and Coorg with 24%. In both these provinces the high rate of immigration is due to the attraction of labourers to plantations of tea in the one case and of coffee in the other. The next highest rate is that of Baluchistan where a large part of the population is naturally migratory. Burma gains 5% by immigrants and Bihar and Orissa loses 4% as emigrants mostly to Assam, after which the percentages fall to about 3% of emigrants in the United Provinces and Madras. It was pointed out by Mr. Jacob in 1921 (*Punjab Census Report*, Chapter III) that it can be shown mathematically that the smaller the unit of population the larger the proportion of persons born elsewhere, and in estimating the significance of migration it is necessary to bear this in mind. India containing nearly one fifth of the world's inhabitants must be expected to show proportionately low figures of migration, and accordingly we find that of the total population enumerated by birthplace, 350½ million odd, less than one million were born elsewhere. Of Indians born in India and found elsewhere at the time of the census no complete figures are of course available, as, though returns of persons of Indian extraction have been obtained from many parts of the British Empire, the number of Indian-born persons resident in foreign countries is unascertainable. It is probable, however, that the number of emigrants from India in other countries at the time of the census amounted to about two and a half millions, the balance of migration being against India.

Proportion of persons born (a) in the province or state where enumerated and (b) elsewhere.

Province, State or Agency.	Number per 10,000 population.	
	Born in province or State where enumerated.	Born elsewhere.
India	9,979	21
Madras	9,943	57
United Provinces	9,887	113
Bihar and Orissa	9,880	120
Hyderabad State	9,828	172
Jammu and Kashmir State	9,824	176
Punjab (including Punjab States Agency)	9,763	237
Travancore State	9,735	265
Western India States Agency	9,726	274
Rajputana Agency	9,705	295
Bengal	9,637	363
Central Provinces and Berar	9,636	364
Bombay (including Aden)	9,525	475
Mysore State	9,474	526
Burma	9,470	530
North-West Frontier Province	9,356	644
Cochin State	9,275	725
Gwalior State	9,201	799
Central India Agency	9,094	906
Baluchistan	8,963	1,037
Baroda State	8,671	1,329
Sikkim State	8,596	1,404
Assam	8,477	1,523
Coorg	7,629	2,371

Nature of migration.

54. Internal migration is of several kinds, for which the following convenient terminology has been used in previous census reports. *Casual* migration, involving minor movements between neighbouring villages, largely by way of marriage, only affects the Indian figures when the boundaries crossed happen to be those of provinces or states. *Temporary* migration is mainly due to the movement in the demand for labour *e.g.* on canals or public buildings, and to pilgrimages and fairs. *Periodic* migration is that caused by recurring seasonal demands, as for harvesters. *Semi-permanent* migration is that of persons who maintain their connection with their pre-migration homes, earning their living elsewhere but

ultimately returning and often leaving their wives and families at home during the period of migration. *Permanent* migration is that in which the migrant leaves one place to settle in another for good. It is necessary also at this census to mention an additional form of migration which may be described as *Daily*.

55. As already indicated casual migration is largely associated with marriage. It is neatly illustrated by the Census Superintendent for the Punjab and Delhi in the marginal table which shows the exchange of wives between Delhi and neighbouring districts in the Punjab. It might be expected that under the circumstances the volume exchanged by adjoining provinces would balance, but this is not the case since both the low ratio of women to men in the north-west and the practice of hypergamy combined with a decrease in social status from west to east among Hindus of many castes results in a surplus movement of women westwards. Thus whereas the numbers of both sexes born in the United Provinces and enumerated in Bihar and Orissa are of corresponding proportions the numbers born in Bihar and Orissa and enumerated in the United Provinces show a great preponderance of females. Similarly females born in the United Provinces and enumerated in Rajputana greatly outnumber the males. It does not appear, however, that the United Provinces give any excess of females to the Punjab as might be expected. There are possibly historical reasons for this. Periodic migration is particularly heavy at harvest time and also at the changes of season when traders, graziers, herdsmen and labourers from Kabul, Baluchistan, Kashmir and the hills generally move down to the plains for the winter months returning to the hills for the hot weather, when the movement is increased by the addition of plains-dwellers moving up to escape from the heat or to profit by the accumulation of people in hill stations. As regards temporary migration the 1931 census was fortunate in avoiding coincidence with pilgrimages and fairs on a large scale, but the immigration figures of the Central India Agency are probably affected to the extent of a few hundreds by the Khajuraho fair in Chhatarpur State and the Garahet cattle fair in Khilchipur State. In Central India again there was some periodic migration on account of harvesting, which had been begun by the census date, and the same in the case of the Central Provinces. Temporary migration continues throughout the year, and some idea of its volume may be obtained from the figures of encampments in Table III. In the case of Bombay a considerable volume of temporary migration to Baroda State was political in nature and accounted for by raiyats in parts of Bombay adjoining Baroda who made an exodus across the State boundary on account of the Civil Disobedience movement in Gujarat. The number of these *hijratis*, as they were called, amounted to 26,755 persons from 244 villages in Bombay Presidency. Some formed fresh hamlets on Baroda land, some occupied vacant sites in Baroda villages and others stayed as guests in the homes of their acquaintances. Many of them (332 males and 1,339 females) had actually been born in Baroda State, and the distances covered in this *hijra* were of the shortest. The very great majority had returned to their villages in British territory within the year following the census.

Casual, Periodic and Temporary migration.

Born in Punjab British Territory and enumerated in Delhi Rural Areas.				Born in Delhi Province and enumerated in Gurgaon, Rohtak and Karnal Districts of the Punjab.			
Persons.	Males.	Females.	Females per 1,000 males.	Persons.	Males.	Females.	Females per 1,000 males.
28,205	6,939	21,266	3,065	22,087	6,107	15,980	2,617

56. Semi-permanent and permanent migration are of more importance and are most conveniently examined by those individual provinces where the volume is considerable. The table on page 64 gives the principal figures of the balance of migration as compared with 1921 and they are illustrated graphically in the map opposite it. Of the semi-permanent migration between provinces the most important has been that to Burma from Madras, Bengal and the United Provinces. The non-permanent nature of this movement is shown by the small number of females as compared to males. Before the census actually took place a very large number of the Indians in Burma returned to their own provinces on account of the anti-Indian riots in Rangoon and the general hostility long entertained towards Indians but evinced throughout Burma in 1930 in action as well as in feeling. Even so the census showed in Burma an excess of 751,595 immigrants over emigrants, an increase of 21,000 on the 1921 figure. Of these immigrants

Semi-permanent and permanent migration.

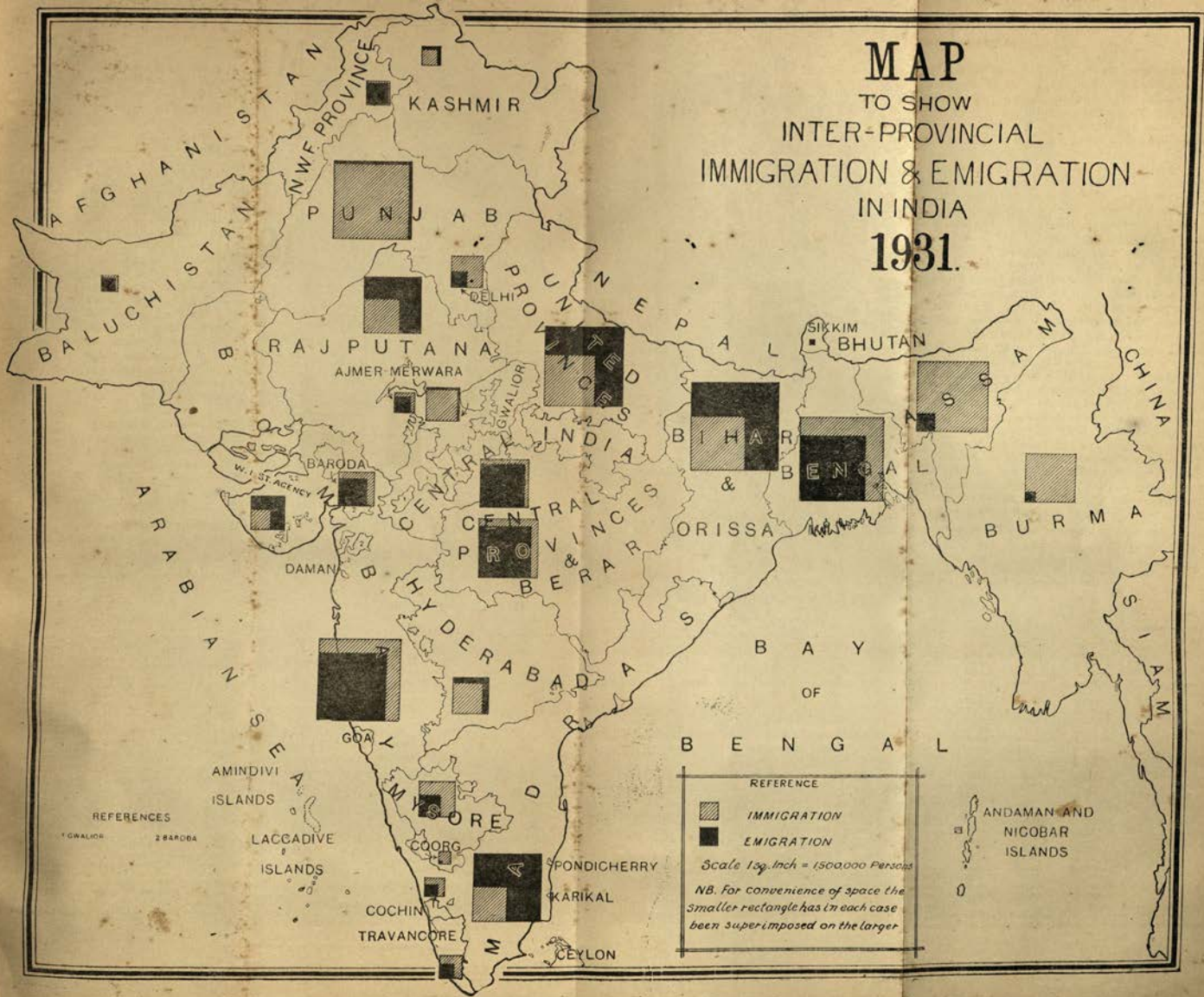
38% come from Madras, Bengal contributing 20%, the next highest quota, and the United Provinces 11%. Of all the immigrants to Burma less than 1 in 5 are women, thus reducing Burma's natural excess of females to a deficiency. Similarly in Assam, but to a far smaller degree, male immigrants reduce the female ratio which is however deficient to start with. This reduction in the case of Assam is slight, since male immigrants are to female immigrants as 4 to 3 only, indicating the much more permanent nature of the movement, which leads to large numbers of tea garden coolies taking up land and settling permanently after leaving the gardens, and which is also in a great degree a migration of Muslim cultivators from Bengal who bring their families with them. Assam's excess of immigrants over emigrants is 1,335,627, of which 41% comes from Bengal, 34 from Bihar and Orissa, 2 of which are from the Bihar and Orissa States, 6 from the Central Provinces, including 1% from the Central Provinces States, 5 from the United Provinces, 4 from Madras (principally from the Agency Tracts) and 2 from Rajputana. No other province has anything approaching this figure of immigration, but Bihar and Orissa have an even larger figure of emigration, the net adverse balance being 1,248,293. The bulk of this goes to Bengal, 65% of the gross emigration, Assam getting 27% and the Bihar and Orissa States over 10%. The United Provinces emigration figure is nearly as high as that of Bihar and Orissa, but the corresponding immigration figure is higher, and the adverse balance is 997,846, Bengal again getting 22%, Bombay 9% and the Punjab 15% of the gross emigration, which is much more evenly distributed between various provinces and states than that of most provinces with a high emigration figure. The same applies to Madras (—868,036 net) once the higher figures of emigration to Burma, 26%, and Mysore, 26%, are excluded; Travancore and Hyderabad come in for the next highest shares of Madras emigration with 9% and 12% respectively. The Punjab has an adverse balance, a considerable proportion of its emigrants going to Bombay. Bengal and Bombay both have high figures of migration, possibly on account of their large Presidency towns, but the balance is in their favour—899,274 in the case of Bengal and 658,267 in that of Bombay. Bengal's immigrants include some 250,000 Nepalis, and 13,557 Europeans 66% of whom were found in Calcutta; Bombay's include 170,085 immigrants from the Nizam's Dominions, 165,477 from Baroda State, nearly 59,000 from Portuguese India, and 16,345 Europeans.

Variation as compared with 1921 in the volume of migration within India.

Province or State.	1931.			1921.			Variation 1921-31.	
	Net gain or loss ±	Immigrants.	Emigrants.	Net gain or loss ±	Immigrants.	Emigrants.	Immigrants.	Emigrants.
1	2	3	4	5	6	7	8	9
PROVINCES OR STATES WHICH GAIN.								
Assam	+1,241,011	1,314,047	73,036	+1,140,752	1,216,661	75,909	+97,386	—2,873
Bengal	+771,936	1,726,370	954,434	+1,132,194	1,817,775	685,581	—91,405	+268,853
Burma	+593,324	617,521	24,197	+553,471	572,530	19,059	+44,991	+5,138
Bombay	+596,707	1,188,901	592,194	+472,023*	1,039,622	567,599	*+256,074	+318,280*
Central Provinces and Berar ..	+227,003	649,064	422,061	+197,323	603,924	406,601	+45,140	+15,460
Mysore	+215,462	340,700	125,238	+210,064	309,850	99,786	+30,850	+25,452
Delhi	+189,736	259,163	69,427	+113,158	182,485	69,327	+76,678	+100
Baroda	+127,901	333,077	205,176	+10,674	231,880	221,206	+101,197	—16,030
Central India Agency	+115,566	598,102	482,536	+58,056	544,688	486,632	+53,414	—4,096
Travancore	+83,919	133,852	49,933	+49,732	71,973	22,241	+61,879	+27,692
Ajmer-Merwara	+44,029	104,938	60,909	+66,033	108,452	42,419	—3,514	+18,490
Cochin	+41,424	87,214	45,790	+15,792	39,689	23,897	+47,525	+21,893
Coorg	+35,388	38,619	3,231	+30,988	33,838	2,850	+4,781	+381
Baluchistan	+23,779	66,542	42,763	+5,924	66,166	60,242	+376	—17,479
North-West Frontier Province ..	+21,187	111,868	90,681	+50,835	118,395	67,560	—6,527	+23,121
Andamans and Nicobars ..	+13,703	14,255	552	+14,080	14,396	316	—141	+236
PROVINCES OR STATES WHICH LOSE.								
Sikkim	—4,782	2,430	7,212	—2,297	1,836	4,133	+594	+3,079
Gwalior	—14,471	281,350	296,821	+632	289,657	289,025	—8,307	+7,796
Jammu and Kashmir	—33,266	61,189	94,455	—22,685	61,561	84,246	—372	+10,209
Punjab†	—67,792	635,025	702,817	+60,940	591,885	530,942	+43,140	+171,875
Hyderabad	—19,788	312,814	332,602	—166,326	197,127	363,453	+115,687	—30,851
Western India States Agency ..	—186,890	106,795	293,685		Included against Bombay.			
Rajputana	—516,898	329,913	864,811	—625,650	242,243	867,893	+87,670	—21,082
Madras	—888,339	246,892	1,135,231	—718,183	196,609	914,792	+50,283	+220,439
United Provinces	—1,063,143	494,308	1,557,451	—974,642	425,152	1,399,794	+69,156	+157,657
Bihar and Orissa	—1,291,567	466,563	1,758,130	—1,567,968	387,068	1,955,036	+79,495	—196,906

*Includes Western India States Agency. †Includes Punjab States Agency.

NOTE.—The figures for Provinces include those for the States attached to them except in the case of Madras, where they exclude Cochin and Travancore. Migration figures to and from countries from outside British India are excluded.


MAP
TO SHOW
INTER-PROVINCIAL
IMMIGRATION & EMIGRATION
IN INDIA
1931.
AFGHANISTAN
N.W.F. PROVINCE
KASHMIR
PUNJAB
BALUCHISTAN
DELHI
RAJPUTANA
AJMER-MERWARA
UNITED PROVINCES
NEPAL
SIKKIM
BHUTAN
ASSAM
CHINA
GWALIOR
CENTRAL INDIA
BIHAR & ORISSA
BENGAL
BURMA
BARODA
W. ST. AGENCY
CENTRAL PROVINCES & BERAR
DAMAN
ARABIAN SEA
HYDERABAD
BAY OF BENGAL
SIAM
GOA
AMINDIVI ISLANDS
MADRAS
MYSORE
REFERENCES
1 GWALIOR
2 BARODA
LACCADIVE ISLANDS
COORG
PONDICHERRY
KARIKAL
COCHIN
TRAVANCORE
CEYLON
REFERENCE
IMMIGRATION
EMIGRATION
Scale 1 sq. inch = 1,500,000 Persons
NB. For convenience of space the smaller rectangle has in each case been superimposed on the larger
ANDAMAN AND NICOBAR ISLANDS

57. It has been pointed out that Assam's immigration is generally speaking of the permanent type. There have however been some changes and developments since 1921, particularly in respect of the volume of migration from provinces which formerly supplied the tea garden labour. Madras is the only province showing any increase in emigration to Assam, and there has been an extraordinary decrease in emigration from Bihar and Orissa to Assam, though the actual number of persons enumerated on tea gardens has increased by some 60,000. Recruitment to Assam from Bihar and Orissa and elsewhere fell off rapidly after 1921, and in the United Provinces, at any rate, it is stated that emigration to Assam has become unpopular "largely as a result of a deliberate campaign against it by non-co-operators in the early part of the decade". Recruitment from Bihar and Orissa began to revive however in the last half of the decade largely as a result of short-term recruitment under which a cooly is brought up to Assam for a year or so and then sent back to his home. Or to quote the Census Superintendent of Bihar and Orissa, "the increase in the number of emigrants from 1927-28 onwards is attributed largely to the popularity of the system of recruitment for short terms of 6, 9 or 12 months". The introduction of this short-term system assisted by cinema propaganda is clearly changing the permanent nature of migration to the Assam tea gardens. Moreover the need for immigrant labour is less than it was. There has been a steady increase in labour obtained locally and lost by transfer, indicating greater freedom and fluidity. During the last five years adult labour born locally has increased by over 50% and some gardens have taken to sending out motor lorries to bring in labour from the villages. On the other hand the whole complexion of the population of Assam is being altered by the permanent immigrants from Mymensingh in Bengal. This has for years been an obvious and disturbing change to all residents in the Assam Valley and it will be best to quote the Census Superintendent for Assam himself:—

"Probably the most important event in the province during the last twenty five years—an event, moreover, which seems likely to alter permanently the whole future of Assam and to destroy more surely than did the Burmese invaders of 1820 the whole structure of Assamese culture and civilization—has been the invasion of a vast horde of land-hungry Bengali immigrants, mostly Muslims, from the districts of Eastern Bengal and in particular from Mymensingh. This invasion began sometime before 1911, and the census report of that year is the first report which makes mention of the advancing host. But, as we now know, the Bengali immigrants censused for the first time on the *char* lands of Goalpara in 1911 were merely the advance guard—or rather the scouts—of a huge army following closely at their heels. By 1921 the first army corps had passed into Assam and had practically conquered the district of Goalpara."

The Assam Census Report of 1921 describes Goalpara as inhabited by these settlers to 20% of its population, and Nowgong to 14%; and describes parties of these settlers as invading the Assam Valley by "almost every train and steamer". Since then these settlers have not refrained from breeding and their progeny being born in Assam is not distinguishable in the Census returns, except in so far as it is predominantly Muslim which the indigenous population is not. The rate of increase in the Muslim population of Assam since 1881 is 111%. As to the change at this census the Census Superintendent may again be quoted:—

"I have already remarked that by 1921 the first army corps of the invaders had conquered Goalpara. The second army corps which followed them in the years 1921-1931 has consolidated their position in that district and has also completed the conquest of Nowgong. The Barpeta sub-division of Kamrup has also fallen to their attack and Darrang is being invaded. Sibsagar has so far escaped completely but the few thousand Mymensinghias in North Lakhimpur are an outpost which may, during the next decade, prove to be a valuable basis of major operations.. .....Where there is waste land thither flock the Mymensinghias. In fact the way in which they have seized upon the vacant areas in the Assam Valley seems almost uncanny. Without fuss, without tumult, without undue trouble to the district revenue staffs, a population which must amount to over half a million has transplanted itself from Bengal to the Assam Valley during the last twenty-five years.....the only thing I can compare it to is the mass movement of a large body of ants."

In Goalpara district there is little room left for expansion; in the Kamrup district, where their immigration is new since 1921, there has been an enormous increase of settlers causing the population figures to increase by 69% in Barpeta sub-division since 1921. In Darrang district also they are rapidly taking up any available waste land. In Nowgong district alone Mymensinghias occupied 33,405 acres in 1920-21, and in 1929-30, 102,363 acres, Muslims having 89,078 and Hindus

13,285 acres. In their anxiety to get land these settlers have at one time and another caused a good deal of friction by squatting in Government Reserves or forcibly occupying the land of local people, from which they are not evicted without difficulty. They are however excellent agriculturists and most industrious, and they spend money freely, at any rate on litigation.

"The exact number of these Eastern Bengal settlers (including their children born in Assam) who are at present living in the Assam Valley is a difficult matter to estimate. Mr. Lloyd in 1921 estimated that including children born after their arrival in this province the total number of settlers was at least 300,000 in that year. As far as I can judge the number at present must be over half a million. The number of new immigrants from Mymensingh, alone, has been 140,000 and the old settlers have undoubtedly been increasing and multiplying. As pointed out in the Census Report for 1921 the colonists have settled by families and not singly. This can be seen from the fact that out of the total of 338,000 persons born in Mymensingh and censused in Assam over 152,000 are women. What of the future? As far as can be foreseen the invasion is by no means complete. . . . . It is sad but by no means improbable that in another thirty years Sibsagar district will be the only part of Assam in which an Assamese will find himself at home".

There is yet a third class of immigrant in Assam, the Nepali, but the Nepali immigrant is fortunately decreasing in numbers, and the increase of Nepalis at this census has fallen from 89 to 36%. The decrease is attributed to action taken by the Nepal Government to discourage the emigration of its subjects. At the same time they are inconveniently numerous in the Khasia Hills where "in the interests of the Khasi population some measures appear necessary to prevent any further expansion of Nepali colonization".

Bihar and Orissa.

58. Bihar and Orissa is among provinces the antithesis of Assam in the matter of migration. It is typical of the rest of India in the general immobility of its population, and 959 persons in every 1,000 were born in the district in which they were enumerated, while 931 in every 1,000 were enumerated in the district in which they were born; on the other hand it has a higher emigration figure than any other province, from which the general standard of Indian migration, or rather the absence thereof, may fairly be judged. The net loss to the province by emigration is 1,758,000, and if British districts alone be taken the loss is considerably greater as the Feudatory States receive twice as many migrants as they send out, and their immigrants are mostly from the British districts of the same province. As in the case of Assam however a change is taking place and the loss by emigration is considerably less than it was in the previous decade. Emigrants have decreased by 197,000 and immigrants have increased by 79,000, and to this has contributed not only the development of urban and industrial areas within the province and the consequent attraction of settlers from outside, but the economic conditions of the province, which towards the close of the decade compared favourably with the conditions in other provinces more severely affected by the industrial depression. The latter cause has also operated to reduce the periodic emigration from the province, which is of very great volume and importance and is at its highest at the time of the census. The loss sustained by emigration therefore is not by any means a permanent loss of the volume indicated by the figures, since much of it returns when the periodic migration is over at the time of the spring harvest or at the beginning of the monsoon. Over two-thirds of the emigrants from Bihar and Orissa were enumerated in adjacent provinces and perhaps the great majority of these return to their homes later. Of the remainder 95% are found in Assam, and here again the new system of short-term recruitment for tea-gardens involves the inference that recent emigrants belong merely to the semi-permanent class and will ultimately return to their province.

United Provinces.

59. In the case of the United Provinces, which has the next largest volume of emigration, this volume of emigration, in contrast with that from Bihar and Orissa, instead of decreasing has increased by a net balance of 158,000. The emigrants are on the whole comparatively evenly distributed to all parts of northern and eastern India, though Bengal gets three times the share of any other province, Bombay, the Central Provinces and the Punjab standing next, while Rajputana conversely sends back more than it receives; but the bulk of this migration is of the semi-permanent description and is described as a blessing to the province since

it relieves the pressure on the soil and will be automatically absorbed within the province by any industrial expansion that takes place.

60. Madras, the third highest province in order of net loss by emigration, is another which calls for some separate treatment, as the bulk of its emigration differs from that of other provinces in being overseas. Here the effect of the worldwide industrial depression is seen in the foreign birthplaces returned in Madras as a result of repatriation. There has been a general increase in the number of persons born in Burma, Ceylon, Mauritius and Natal. Even so the 1931 figure shows a very marked increase in emigration to Malaya as well as in emigration to other parts of India. The overseas migration to Malaya and Ceylon, which is 94 to 95% Madrasi, is treated in another paragraph, but it may be pointed out here that emigration from Madras is not restricted to 'assisted emigration' under the Act of 1922, which controls the departure of any persons from British India who are assisted by any person other than a relative, that is of persons recruited by agencies, but also of a considerable quantity of the natural migration of persons who go and return as they please, and in this connection the Census Superintendent points out that "it is possible for an emigration habit to arise not necessarily connected with financial or seasonal stress at home. This.....undoubtedly exists in South India and the Circars coast touching the emigration movement to Ceylon, Malaya and Burma". The area that supplies Assam and Burma is generally speaking not the same as that from which emigration to Malaya and Ceylon takes place. The latter is a Tamil movement; the emigrants to Burma are Telugus: "the Burmese emigration is largely a Circars phenomenon and.....Burmese development has had a profound influence on the Telugu coastal districts". To this the presence of 297,543 Madrasis in Burma at the time of the census testifies in spite of the largely increased number who had returned as a result of the anti-Indian riots in May 1930, after which the volume of return continued so steadily that in May 1931 it was still 40% above that of the year before. Emigration to Assam again is neither Tamil nor Telugu but mainly Sawara from the Vizagapatam Agency tracts, and showed a great increase from 1925-27 as a result of the enforcement in the Sawara maliahs of a policy of forest reservation. Later when the application was mitigated emigration decreased, and recruitment is now of the short-term variety, repatriation after two years being guaranteed. **Madras.**

61. In the Central Provinces the Census Superintendent detects the growth of what may be described as Daily Migration. In England and Wales a column to show the place of work was included in the schedule in 1921, but though such a daily migration is familiar enough in Bombay and in Calcutta where 26,000 living outside the city travel in daily by train alone, to say nothing of those who use cars, buses or trams, in India generally the conditions under which the residence of the worker and the place at which he works are so far apart as to form different census units have hardly yet arisen to an extent to justify a column in the schedule. Nevertheless in some industrial areas it is already becoming a common practice for persons to live outside the place of employment and to visit it every day. This is apparent in Nagpur, for instance, where in some cases clerks live even 25 to 30 miles away at Ramtek and come in by train to their work every morning. Similarly industrial settlements outside the town provide workmen who come in daily. The 'buses run to neighbouring villages for labour by Assam tea gardens have already been mentioned. The Census Commissioner for Travancore State reports that daily migration is now a common feature of important towns like Trivandrum, Nagercoil, Quilon and Alleppey, and the Census Superintendent for Delhi estimates the average volume of daily migration throughout the year between Shahdara and Delhi city, a matter of 3 or 4 miles only, at 1,500 persons. **Daily Migration.**

62. In 1921 the balance of migration as between British and State territory was against the States and in favour of British India, but this position has been reversed during the decade, possibly on account of the increasing pressure on the less thickly populated areas which are mostly in State territory. Whereas the net loss to the states in 1921 was 124,000 (in 1911 it had been 132,000), in 1931 the states gained 490,935 from British India. In spite of this there has been very little change in the direction of migration between the States and British territory, since all those states which gained on the balance in 1921 have continued to do so except Gwalior, where the Census Commissioner of the State attributes "to the dislocation in trade and the general financial stringency" the **British India and States.**

Gain and loss by migration (000's omitted).

States.	Net gain + or loss—	Receives from British Territory.	Gives to British Territory.
1	2	3	4
States which gain.			
Mysore State ..	+211	331	120
Punjab States and Agency	+187	539	352
Bengal States ..	+155	186	31
C. P. States ..	+135	218	83
B. and O. States ..	+105	225	120
Travancore ..	+87	105	18
Baroda	+77	191	114
Bombay States ..	+69	334	265
Cochin	+37	55	18
Other Madras States	+23	44	21
U. P. States ..	+10	92	82
Gwalior State ..	+7	70	63
N. W. F. Tribal Areas.	+1	29	28
Total gain ..	+1,104	2,419	1,315
States which lose.			
Central India ..	—8	294	302
Jammu and Kashmir	—27	60	87
Hyderabad ..	—88	229	317
W. I. States ..	—148	50	198
Rajputana ..	—326	220	546
Others	—12	13	25
Total loss ..	—609	866	1,475
Net	+495	3,285	2,790

since much of its phenomenal increase choking up of the "migratory streams of business men and labourers" which flowed in former years. On the other hand of those that lost in 1921 only the Central India Agency and Baroda show a gain at this census, though the Bombay States, included in 1921 with what is now the Western India States Agency, a losing unit, show a gain this time treated separately. Indeed the net losses of the Rajputana Agency and Jammu and Kashmir State have considerably increased since 1921, but these increased losses have been far more than balanced by such large net increases as that of the Punjab States which, +84,000 in 1921, were +187,000 in 1931. Although Rajputana as a whole has a migration balance against it, Bikaner State, in which there has been during the decade a great extension of irrigation, has a heavy balance in its favour, in population is due to immigration. It will be seen from the marginal table that Bikaner has drawn considerable numbers not only from the other Rajputana States and from British districts of the Punjab, but even from the Punjab States, which otherwise absorb rather than extrude emigrants. Moreover, it is clear that this tendency is not new, though the feature of the decade is the proportion of immigrants drawn from the British Punjab. Whereas much of the emigration from Rajputana generally must be regarded as probably of a semi-permanent nature only, it is clear that the immigration to Bikaner is of a permanent nature. Contrariwise the emigration is largely of the semi-permanent variety, and of the 846,811 persons born in Rajputana and emumerated elsewhere the majority, in all probability, come from Marwar, Bikaner, Jaipur, Jaisalmer and Mewar, but above all from Marwar and Jaipur, and consist of those traders, with their dependants, who are known indiscriminately as Marwaris and play such an ubiquitous and important part in commerce and banking throughout India. One rather unexpected migration item between British territory and the States is the flow of migration to Cochin and Travancore which already have the densest populations in India and the highest natural rate of increase. In Cochin this is probably to be accounted for by the fact that most of the migration is of the 'casual' type, while in Travancore it consists of Tamil labourers on plantations in the highlands marching with British territory. Here communications with the Tamilnad have in the past been easier than with the coast, but with the opening up of good roads and easy communication between the estates in the hills and the populated plains, it is likely that Travancore State will tend more and more to replace Tamil by indigenous labour.

Birthplace of Bikaner population.

Locality of birth.	1921.	1931.	Increase per cent.	Percentage of increase.
Bikaner State ..	*606,398*	*774,915*	*27·8*	*61*
Elsewhere ..	*53,287*	*161,303*	*202·7*	*39*
Rajputana ...	25,874	57,415	121·9	11·3
British Punjab ..	20,852	81,899	292·8	22·2
Punjab States ..	4,318	16,390	279·6	4·3
Elsewhere ..	2,243	5,599	149·6	1·2

French and Portuguese India.

63. As between British India and the French and Portuguese settlements the balance of migration is greatly in favour of British India, from which 82,271 persons are received, the very great majority, their figure is estimated at 68,000 at least, from the Portuguese settlements, and the greater part of that going to Bombay. In the case of the French settlements, politics plays a unexpected hand. North Arcot district in Madras was found to contain a remarkable increase in the number of persons born in French India. Enquiry showed that they

represented the party defeated in recent elections in Pondicherry, who found it healthier to withdraw to British territory than to remain at home during the executive arbitrament and jurisdictional domination of their political adversaries.

External Migration.

64. Outside India the balance is the other way, in spite of the fact that circumstances are against emigration from India. Early marriage, which is almost universal, is a great deterrent at one end and immigration restrictions at the other. There are in India altogether 730,546 persons of foreign birth of whom 595,078 are of Asiatic birth, 118,089 of European birth and 17,379 others. Their distribution by origin is shown in the marginal table. On the other hand it has been stated above that there were about 2½ million Indians resident out of India at the census, giving a grand migration balance of −1¾ million. Nearly all of these are resident in other parts of the British Empire, but it should be made clear that this total is intended to include all Indians resident outside India, those who have emigrated during the decade being estimated at 1,000,000 only. A marginal table shows such figures as it has been possible to collect from the different parts of the British Empire. It represents of course the position in 1931, when the repatriation of Indians from Malaya had already taken effect since the depression in rubber production had led to a reduction of wages and employment as early as the end of 1929 both in Malaya and Ceylon; from the former some 78,000 Indians including infants had been repatriated by the end of 1930, and a further 56,000 followed in 1931, while from Ceylon 11,000 were repatriated in 1931. There are over 75,000 Indians in Fiji, an increase of about 14,500 since 1921, against repatriations to the extent of 11,351 of which 4,435 were Madrasis. Emigrants from the United Provinces, have increased and the increase is still more marked in the case of Punjabis (mostly Sikhs), whose number has quadrupled in the decade—it was 450 in 1921, and of traders from Bombay and the Western India States, whose ratio of increase has been much the same. These were approximately 325 in 1921. Precise numbers are not available as the census due in the Fiji Islands in 1930 did not take place. The Bombay traders travel backwards and forwards more often and bring a higher proportion of women than other immigrants. Probably more than two-thirds of the Indians in the Fiji Islands depend on the sugar industry, holding some 63,000 acres, either as tenants of the sugar company or otherwise, and producing annually cane worth fifty or sixty lakhs of rupees. Demands for repatriation have declined very markedly, having fallen from 1,180 in 1926 to 502 in 1930. During the decade under review Indian emigration has been controlled by the Emigration Act of 1922 under which the emigration of unskilled labour is prohibited except to such countries and under such conditions as may be specified by the Governor-General in Council, whose notification under the Act must be approved by both chambers of the legislature. The quantity of skilled labour which emigrates is very small and is indicated by the partial figures in the accompanying table.

Distribution of Foreign-born by continents.

Born in	1931.	1921.	Variation.
Asia	595,078	472,576	+122,502
Europe	118,089	121,064	−2,975
Africa	11,408	4,719	+6,689
America ..	4,455	3,446	+1,009
Australasia ..	1,516	1,683	−167
Total ..	730,546	603,488	+127,058

Indian Emigration 1921-31.

Destination.	Persons.
Malaya	510,000
Ceylon	365,000
Fiji	15,000
Portuguese East Africa	4,000
United Kingdom	4,000
Elsewhere	12,000
Total ..	1,000,000

Statement showing Skilled Labour Emigrants from the port of Calcutta during the decade 1921--1930.

Embarked for	Profession.					Total.
	Tailoring.	Theatrical Artists.	Brick-laying.	Match-Manufacturing.	Welding.	
Siam (Bangkok)	79	..	..	..	..	79
Mauritius	..	29	18	2	..	49
Sarawak, Malaya and Straits Settlements.	..	..	..	..	2	2
Total ..	79	29	18	2	2	130

The effect of the Emigration Act has been to put an end to the emigration of unskilled labour to any place outside the Indian Empire except Ceylon and Malaya. Even to British Guiana, where the climate is not unlike that of Ceylon, and where the officer (Sir Maharaj Singh) deputed to report on conditions found that the conditions of education, of medical assistance and of the standard of living generally were higher than those of rural India and that no political disabilities of any kind attached to Indian settlers, emigration, stopped on account of mortality on the voyage many years ago, has not been renewed. From South Africa the tendency has been rather for a return to India, which is assisted by the Union Government by a bonus of £20 per adult and £10 per child, with free passage and free railway fares at each end of it. Thus while 791 emigrants from S. Africa returned to Madras and Calcutta in 1930, 1,707 returned to these ports in 1931. The total number of Indians returning from S. Africa to India in 1931 was 1,961 more than half (988) of whom were colonial born. The general position therefore is that in spite of a rapid and heavy increase in population during the decade there has been even less relief by emigration than in previous periods.

Malaya and Ceylon.

65. The two most important countries for Indian emigration at present are Malaya and Ceylon, as indicated above. Recruiting of Indian labour to Malaya was stopped in August 1930 on account of the fall in tin and rubber, and the considerable repatriations have been already mentioned. None the less the 1931 census of British Malaya found 624,009 Indians in that country details of which by sex, by religion and by age are given in the margin. Of this population 222,839 (153,408 males and 69,431 females) were engaged in agricultural pursuits, 30,214 (29,596 males and 618 females) in commercial pursuits and 19,415 (18,280 males and 1,135 females) in industry. The remainder were of miscellaneous, including administrative, personal or professional service (133,898 males and 11,845 females), or of non-productive occupations (85,846 males and 119,952 females). In the case of Ceylon recruitment of Indian labour for rubber estates was stopped in 1930, but otherwise emigration continued, though it appears that the absorption of Indian labour in that country has nearly reached the saturation point. The marginal table shows the net figures of Indian immigration into Ceylon, that is the balance of arrivals over departures, from 1923-1931. A complete census of Ceylon was not taken in 1931, but the figures available show "natives of India" for Colombo, and to these must be added nearly 300 others who are obviously of Indian races including "Afghans", a term used in Ceylon for Balochis, and about 50 Burmans. Enumeration by religion was likewise incomplete, even for such figures of Indians as we have, but it is easy to allot the different classes of Indians to their main religions with a fair certainty of accuracy, and the result according to religion is shown in the marginal table. The most important Indian elements in Ceylon after the Tamil labour population are Malayalis, of whom Cochin and Travancore States contribute some 2,500 and 4,000 respectively, Nattukottai Chettiyars, Bohras, Baluchis, Mappillas and Memons, about 500 Bengalis, and 200 Parsis, but 95% of the whole Indian population in Ceylon are Tamils, in round numbers 739,000.

Indians in British Malaya in 1931.

Religion.	Persons.	Males.	Females.
Hindu ..	509,202	333,960	175,242
Sikh ..	18,180	13,995	4,185
Muslim ..	56,506	47,962	8,544
Christian ..	36,614	22,699	13,915
Other ..	3,507	2,412	1,095
Age			
0—10 ..	113,791	57,172	56,619
10—20 ..	88,117	52,053	36,064
20—55 ..	413,226	305,557	107,669
55 and over ..	8,875	6,246	2,629

Net emigration India to Ceylon. Excess departures+ Excess returns—

1923 ..	+38,530
1924 ..	+97,865
1925 ..	+72,382
1926 ..	+40,481
1927 ..	+71,917
1928 ..	+40,116
1929 ..	+3,867
1930 ..	—7,306
1931 ..	—7,529

Indians in Ceylon 1931.

Religion.	Persons.	Males.	Females.
Hindu ..	743,326	400,743	342,583
Buddhist ..	2,260	1,655	605
Muslim ..	20,778	15,553	5,225
Christian ..	11,428	8,520	2,908
Other ..	378	244	134
Total ..	778,170	426,715	351,455

Some idea of the economic value to India of the emigration to Malaya may be gathered from the fact that land held by Indians in the Straits Settlements alone was estimated as worth Rs. 2,45,01,059; Savings Bank deposits held by Indians in Malaya amounted at the end of 1931 to the equivalent in dollars of Rs. 35,58,614 an average of Rs. 146 per depositor, while remittances by Indians from Malaya to India during 1931 came to a total of Rs. 38,83,065—an average of Rs. 69 per

remittance. In Ceylon however the indebtedness of Indian labour is a troublesome problem still unsolved. Emigrants returning in 1929 from Fiji, Mauritius and Trinidad combined brought back a total of Rs. 5,11,147 between 2,174 men, women and children, working out at over Rs. 234 per head, children included.

Indians on the High Seas.

66. An attempt was made at this census to obtain a return of Indians on the High Seas outside Indian waters through the masters of the vessels on which they were passengers. A census of persons on ships is a familiar undertaking to most masters, and the Port officers at the larger ports were given special forms with instructions to issue them to all vessels shipping crews in Indian ports within the six months before the census, and the masters were requested to return the schedules from the first port touched after February 26th, 1931. The numbers ultimately returned in this way to the ports of Rangoon, Calcutta, Bombay, Karachi and Aden amounted to 12,540 of which 122 represented females. The returns received in Madras proved to come entirely from Indian waters and were therefore not treated separately from the port population. In Bombay and Karachi returns came from outside Indian waters, but were amalgamated in the provincial totals. The majority of the returns were received through Calcutta and Rangoon; they were not amalgamated in the provincial totals and do not appear as part of the population of India but are given separately here together with the returns that came through Bombay, Karachi and Aden, which should, strictly speaking, have likewise been separately treated. These returns will be found in Appendix II to the Tables Volume where they have been arranged in a series of forms corresponding to the Imperial Tables.

The following points are worth notice. Nearly half the Indians enumerated on the High Seas came from Bengal and nearly a quarter from Assam; the remaining quarter or more represented the United Provinces, Bombay, Punjab and other provinces in that order, but as a matter of fact the numbers hailing from French and Portuguese India, mostly of course Goanese, totalled rather more than those who came from the Punjab. Figures for age and civil condition were available only on the Calcutta and Rangoon schedules, and a great majority were naturally aged from 20—40. A majority of them were married, but, as might be expected, even among those over 20 marriage was much less universal than on land. In the matter of occupation they were mostly of course shown under the heading 'Transport by Water', but the large numbers having a subsidiary occupation in cultivation are noteworthy. Most of them, of course, are lascars, who are also cultivators in Bengal or Assam. Well over a quarter of the total are literate, but less than 1 per cent. are literate in English. In languages more than half have Bengali as their mother-tongue and the next most predominant language is Hindustani, and these two languages also predominate among the subsidiary languages spoken. Returns of language, however, are only available, as also in the case of literacy, from the Calcutta and Rangoon schedules. In religion a great majority are Muslims from whatever port the return is obtained. Among Hindus the predominant caste is that of Kharva, a sea-faring caste in Cutch and the neighbourhood.

Indians Overseas.

67. As will be already clear the Indian communities in other parts of the British Empire are no longer reinforced by any emigrants from India except the very small numbers of skilled workmen who come and go to them. Strictly, therefore they are outside the scope of Indian emigration as well as of the India census. But as their numbers are likely to be of interest to their fellow country-men such figures as are available—mostly from British Colonial census returns of 1930 or 1931—have been tabulated in the appendix to the India Tables. In the Union of S. Africa there are about 165,500 Indians of whom 142,979 are found in Natal. In Kenya there are 26,759 Indians; the other overseas Indian communities in order of size are Mauritius, 268,870, Trinidad and Tobago 138,667, British Guiana 130,540, Fiji 75,117, Tanganyika 23,422, Jamaica 17,599, Zanzibar 15,246, Uganda 11,613 and Hong Kong 4,745, no other British colony containing as many as 2,000 Indians. There are about 11,000 Indians scattered in numbers of under 2,000 in various other parts of the British Empire and probably about 9,000 in the British Isles. Ferenczi (*International Migrations*, II page 592) gives 74,000 as the number of Indians in

England and Wales and 8,000 in Scotland, but it is clear from the Census Report of England and Wales for 1921 that this represents the number of persons born in India—most of them probably British. The increase in that number since 1911, *viz.*, 11,000, though far from being purely Indian is more likely to be indicative of the number of actual Indians, which may conveniently be estimated at 9,243 ; there are reported to be at least 2,000 Indian students alone at different universities in England and Scotland, and the census of England and Wales returned 7,128 Indians of Asiatic origin in those countries in 1931, and one in the Isle of Man. This makes a total for the whole of the Empire outside India of approximately 2,300,000. Outside the Empire there are about 104,000 distributed as follows :—About 5,000 in the U. S. A.; in Surinam (Dutch Guiana) there are probably about 35,000 ; in the Netherlands Indies the number of British Indians is estimated at 25,000, while the French possessions of Madagascar and Réunion contain about 7,500 Indians. There are or were within the decade some 3,900 in Persia, some 5,000 in Portuguese East Africa, 2,362 in Iraq, and at least another 20,000 must be allowed for Afghanistan, the continent of Europe and elsewhere. Apart from students and travellers the Census Commissioner for Baroda State actually reports the presence in Spain of some 200 Bohras from Baroda doing business in Bilbao, Malaga and in other towns. The Imperial Indian Citizenship Association records approximately 20,000 Indians resident outside the British Empire in addition to the foreign countries for which details are given here. It will therefore probably be safe enough to say 20,238 for elsewhere, making a total of Indians resident overseas of approximately 2,404,000, so that a rough statement of two and a half million is not likely to be far from the truth.

Indian resident overseas.

Name of country.	Indian population.	Date of information.*
British Empire.	*2,300,000*	..
Ceylon	778,170	1931
Malaya	624,009	1931
Mauritius	268,870	1931
S. Africa	165,500	1926, 1930
Trinidad, etc. ..	138,667	1931
British Guiana ..	130,540	1931
Fiji	75,117	1930
Kenya	26,759	1931
Tanganyika ..	23,422	1931
Jamaica	17,599	1930
Zanzibar	15,246	1931
Uganda	11,613	1926
England and Wales..	7,128	1931
British Isles (elsewhere)	2,115	..
Hongkong.. ..	4,745	1931
Elsewhere ..	10,500	1911—1931
Foreign territory	*104,000*	..
Dutch East Indies ..	25,000	..
Dutch Guiana ..	35,000	1920
Madagascar, etc. ..	7,500	..
Portuguese East Africa	5,000	1932
U. S. A.	5,000	1921
Persia	3,900	1922
Iraq	2,362	1932
Elsewhere ..	20,238	..

*1931 refers to census figures of that year. The other figures refer to any data available from reports of the Protector of Immigrants, Blue Books, etc., those in round numbers being approximate only, and where no date is given estimated.

Emigration has a perceptible influence socially on Indian emigrants. The Fiji Indians and often the South African are found to have abandoned caste restrictions, and owing to the paucity of women among them inter-caste marriages are frequent, and social relations generally freer than in India.

" Family repatriation is commonest with the Madrasi, who is reported to retain longest his connection with his home country and ancestral lands.....Emigration has no observable effect on religion. The Madrasi abroad has sufficient of his own kind around him to be able to continue unaltered in a new country such religious practices as he favours at home.....Caste rigidity undoubtedly weakens, but so largely homogeneous are the contributions that here too the effect is less than might be expected. Also no Madrasi emigrant.....severs his ties of community with the home country, and on his return he seeks to take a normal place within it.....Effects on occupation are less than might be expected. The great mass.....go forth to carry out in their new countries the agricultural occupations they inherited at home. The contribution to domestic service is by classes contributing to it in India. The traders are those who in India would probably also have traded.....The Madrasi emigrant..... takes his own world with him and sets it down in his new surroundings ".

Mutatio loci, non ingenii. Caelum non animum mutant.

SUBSIDIARY TABLE I.

General distribution of the Population of each Province and State by birth-place and place of enumeration.

Province, State or Agency in which enumerated.	Enumerated in Province, State or Agency of Birth-place (000's omitted).			Enumerated in the same province but born elsewhere (000's omitted).									Born in the same province but enumerated elsewhere (000's omitted).								
				Contiguous Provinces.			Non-contiguous Provinces.			Outside India.			Contiguous Provinces.			Non-contiguous Provinces.			Outside India.		
	Persons.	Males.	Females.	Persons.	Males.	Females.	Persons.	Males.	Females.	Persons.	Males.	Females.	Persons.	Males.	Females.	Persons.	Males.	Females.	Persons.	Males.	Females.
Ajmer-Merwara ..	543	245	208	101	47	54	3	2	1	1	1	..	33	14	19	27	17	10	..	..	..
Andamans and Nicobars	14	7	7	..	..	..	14	11	3	..	..	..	..	..	..	..	..	..	..	..	..
Assam	7,839	4,025	3,814	582	331	251	731	424	307	94	63	31	67	38	29	5	3	2	..	..	..
Baluchistan ..	778	422	356	48	36	12	17	14	3	23	16	7	39	24	15	2	2	..	..	..	..
Bengal	49,233	25,260	23,973	1,212	848	364	513	369	144	127	80	47	892	547	345	61	35	26	5	4	1
Bihar and Orissa ..	41,819	20,824	20,995	414	207	207	53	35	18	41	16	25	1,260	851	409	497	291	206	..	..	..
Bombay (including Aden).	25,071	13,065	12,006	914	488	426	274	194	80	61	46	15	542	249	293	49	32	17	9	6	3
Burma	13,871	6,847	7,024	461	385	76	156	133	23	158	116	42	11	6	5	12	7	5	..	..	..
Central Provinces and Berar.	17,335	8,651	8,684	553	281	272	95	60	35	6	5	1	283	134	149	138	77	61	..	..	..
Coorg	124	65	59	38	25	13	..	..	..	..	..	..	2	1	1	..	..	..	..	..	..
Delhi	373	215	158	204	118	86	54	33	21	4	3	1	52	19	33	17	12	5	..	..	..
Madras	46,957	23,180	23,777	177	86	91	38	23	15	20	12	8	610	326	284	577	375	202	64	55	9
North West Frontier Province.	2,312	1,239	1,073	93	72	21	18	15	3	47	33	14	65	42	23	25	21	4	..	..	.
Punjab	27,816	15,217	12,599	604	297	307	26	14	12	43	32	11	502	283	219	200	145	55	4	4	.
United Provinces ..	49,055	25,812	23,243	439	174	265	54	31	23	65	45	20	873	439	434	684	520	164	..	..	..
Baroda State ..	2,118	1,125	993	288	109	179	34	22	12	1	1	..	200	80	120	5	3	2	..	..	..
Central India Agency	6,032	3,153	2,879	577	237	340	20	13	7	2	2	..	457	190	267	24	14	10	..	..	..
Cochin State ..	1,117	553	564	85	35	50	1	1	..	..	..	..	41	19	22	4	1	3	2	4	..
Gwalior State. ..	3,241	1,746	1,495	270	114	156	11	6	5	..	..	..	287	102	185	9	6	3	..	..	..
Hyderabad State ..	14,188	7,203	6,985	214	145	69	27	17	10	4	3	1	323	146	177	8	5	3	..	..	..
Jammu and Kashmir State.	3,582	1,908	1,674	59	27	32	1	1	..	3	2	1	87	53	34	6	5	1	..	..	..
Mysore State ..	6,212	3,163	3,049	327	179	148	13	8	5	3	2	1	117	56	61	7	4	3	..	..	..
Rajputana Agency ..	10,894	5,747	5,147	322	133	189	7	3	4	1	1	..	697	333	364	149	99	50	..	..	..
Sikkim State ..	94	47	47	2	1	1	..	..	..	12	6	6	6	3	3	..	..	..	..	..	..
Travancore State ..	4,960	2,497	2,463	131	66	65	2	1	1	1	1	..	47	22	25	2	2	..	3	3	..
Western India States Agency.	3,889	1,980	1,909	46	19	27	59	24	35	2	1	1	277	137	140	16	11	5	..	..	..

NOTE.—In these Subsidiary Tables the figures for Provinces include those for the States attached to them except in the case of Madras, where they exclude Cochin and Travancore. Figures in columns 5-10 include immigrants (82,271) from French and Portuguese Possessions and those Indians (87,752) whose birth-place was not specified.

SUBSIDIARY
Migration between Provinces and
Province, State or Agency

Province, State or Agency in which born.		British Provinces.											
		Assam.	Bengal.	Bihar and Orissa.	Bombay.	W. I. States Agency.	Burma.	C. P. and Berar.	Delhi.	Madras.	N.-W. F. Province.	Punjab (including Agency).	United Provinces.
1		2	3	4	5	6	7	8	9	10	11	12	13
Total	1931	**1,408,763**	**1,853,708**	**509,837**	**1,250,461**	**109,674**	**775,963**	**655,574**	**263,188**	**267,195**	**159,166**	**674,152**	**559,605**
	1921	**1,290,157**	**1,929,460**	**422,244**	**1,081,649**		**706,725**	**609,504**	**185,770**	**209,862**	**157,562**	**627,137**	**480,414**
Ajmer-Merwara	1931	77	516	123	20,477	519	24	3,429	777	..	88	931	3,399
	1921	32	1,930	132	7,991		40	1,934	278	445	24	1,536	1,729
Andaman and Nicobar Islands.	1931	4	17	4	81	2	82	96	..	..	2	105	140
	1921	1	32	4	21		128	1	2	2	..	70	33
Assam	1931	..	63,416	2,030	475	2	4,475	587	83	..	80	322	1,169
	1921	..	68,802	949	691		3,018	126	92	51	505	404	904
Baluchistan	1931	245	192	16	35,450	168	115	709	189	..	444	4,065	455
	1921	188	92	47	54,352		31	635	42	147	11	3,567	365
Bengal	1931	575,199	..	157,524	6,005	648	158,098	6,946	6,168	..	795	4,618	30,950
	1921	375,578	..	116,922	7,955		146,087	3,274	2,778	3,181	917	3,172	18,634
Bihar and Orissa	1931	471,786	1,138,850	..	1,504	79	18,732	51,919	715	..	159	1,281	69,733
	1921	570,642	1,227,579	..	3,931		20,616	32,439	246	16,879	129	894	77,693
Bombay (*including Aden*)	1931	6,552	7,797	7,316	..	46,954	8,729	105,013	2,275	..	752	8,611	8,466
Western India States Agency.	1931	..	..	78	198,708	..	8,889	..	..	..	..	..	42
Bombay	1921	1,176	11,223	7,077	..		18,471	107,268	1,236	17,806	2,489	9,987	7,563
Burma	1931	7,787	3,791	298	829	523	..	156	84	3,181	76	2,047	1,388
	1921	7,413	2,361	217	855		..	80	50	1,915	95	1,617	1,380
Central Provinces and Berar.	1931	82,045	45,844	89,317	55,456	657	1,033	..	862	..	338	2,419	15,217
	1921	91,393	54,810	77,323	31,922		1,425	..	329	12,529	92	2,515	11,113
Coorg	1931	1	3	6	144	..	2	254	..	..	..	..	89
	1921	14	6	1	36		3	9	..	345	..	..	30
Delhi	1931	107	2,159	359	5,317	217	503	795	..	..	631	37,119	15,128
	1921	97	1,889	541	4,915		727	781	..	216	1,717	35,165	14,914
Madras	1931	57,469	42,489	40,786*	60,199	381	297,633	13,045*	1,446	..	776	1,601	3,099
	1921	54,536	31,270	35,933	45,592		272,565	6,505	553	..	1,959	1,583	2,220
N.-W. F. Province	1931	593	1,964	1,299	11,686	47	907	1,167	1,758	..	..	52,773	3,562
	1921	318	1,026	329	12,051		1,057	650	616	146	..	34,252	1,893
Punjab (*including Agency*).	1931	6,134	25,084	15,330	90,916	1,161	24,910	15,775	88,612	..	85,146	..	97,908
	1921	3,178	15,826	7,857	57,465		20,938	9,645	64,810	625	97,115	..	84,169
United Provinces	1931	68,126	348,399	126,539	136,847	2,357	86,427	118,753	116,164	..	11,177	232,112	..
	1921	77,048	343,095	115,794	115,029		70,868	102,104	75,084	2,244	7,684	194,155	..
Baroda State	1931	232	350	63	165,477	34,570	342	509	65	..	8	143	326
	1921	125	199	153	215,281		662	393	22	130	228	97	183
Central India Agency	1931	14,887	1,722	2,075	13,898	965	153	176,802	310	..	280	331	109,242
	1921	17,602	941	2,158	19,313		508	194,203	305	..	..	608	82,531
Cochin State	1931	1	23	†	3,035	12	239	..	17	14,820	..	..	..
	1921	4	222	29	479		155	..	3	10,124	17	33	1
Gwalior State	1931	262	1,581	184	2,203	136	90	8,806	1,651	..	156	1,560	47,303
	1921	332	1,788	1,246	1,607		129	2,519	1,457	15	..	1,793	47,600
Hyderabad State	1931	389	849	468	170,085	199	939	91,065	278	58,476	182	797	1,876
	1921	160	389	349	219,252		494	90,930	351	38,916	329	1,115	1,736
Jammu and Kashmir State.	1931	24	209	92	1,285	22	127	273	470	..	8,263	79,691	1,421
	1921	46	169	364	715		149	197	185	33	3,006	75,159	1,404
Mysore State	1931	85	322	403	17,607	88	1,409	711	142	86,485	148	293	525
	1921	234	451	347	14,624		1,640	470	46	66,855	331	258	413
Rajputana Agency	1931	21,780	32,906	20,756	108,472	12,469	1,909	51,621	36,951	..	1,545	199,214	81,794
	1921	15,770	47,865	18,812	156,357		3,418	49,207	33,729	1,415	743	222,173	68,112
Sikkim State	1931	64	6,320	26	724	..	17	12	..	..	..	..	2
	1921	22	4,057	13	2		15	9	..	..	..	..	1
Travancore State	1931	1	8	†	618	3	816	..	4	16,756	..	1	60
	1921	6	532	64	148		319	59	3	8,293	8	6	41
India Unspecified	1931	175	267	1,186	22,311	3,714	28	93	69	51,162	755	842	923
	1921	689	30	282	9,856		8,419	..	225	40	996	1,581	330
French and Portuguese Settlements.	1931	22	1,292	285	59,092	992	893	528	73	16,012	67	33	91
	1921	57	1,181	125	59,182		651	486	43	14,257	..	145	197
Outside India	1931	94,716	127,338	43,274	61,560	2,879	158,442	6,510	4,025	20,303	47,298	43,243	65,297
	1921	73,496	111,865	35,176	42,027		134,195	5,580	3,285	13,253	39,167	35,252	55,262

* Includes figures for Cochin and Travancore.

NOTES.—(*i*) 1921 figures against Bombay include those for the

(*ii*) In this table emigrants to places outside India have not been included.

TABLE II.

States in 1921 and 1931.

in which enumerated.

Other Provinces.	Total.	Indian States. Baroda.	Central India. Agency.	Cochin.	Gwalior.	Hyderabad.	Jammu and Kashmir.	Mysore.	Rajputana.	Sikkim.	Travancore.	Total.	Grand Total.
14	15	16	17	18	19	20	21	22	23	24	25	26	27
249,960	8,737,246	324,579	600,766	87,417	281,550	247,795	64,196	344,592	830,939	15,417	135,103	2,432,354	11,169,600
237,334	7,937,998	232,494	548,094	39,759	290,340	202,781	63,420	314,531	243,002	22,978	73,591	2,030,990	9,968,988
141	30,501	529	4,326	..	2,316	1,525	6	183	21,522	..	1	30,408	60,909
299	16,370	110	2,642	..	703	2,946	11	20	19,616	1	..	26,049	42,419
2	535	1	4	..	..	..	..	10	..	..	2	17	552
1	295	2	..	..	2	2	..	15	..	..	..	21	316
190	72,829	11	32	3	2	5	7	12	124	11	..	207	73,036
176	75,718	2	56	..	25	5	2	18	46	23	14	191	75,909
78	42,126	200	162	8	7	21	93	95	51	..	..	637	42,763
91	59,568	232	158	..	25	46	94	63	55	..	1	674	60,242
1,976	948,927	393	844	33	260	313	111	617	1,007	1,707	222	5,507	954,434
2,322	680,820	257	949	9	325	293	105	425	774	1,566	58	4,761	685,581
769	1,755,527	113	985	..	102	564	23	58	452	305	1	2,603	1,758,130
1,964	1,953,012	42	708	..	95	580	32	101	333	128	5	2,024	1,955,036
7,935	210,400	220,659	42,456	291	4,215	68,058	199	31,067	14,332	..	517	381,794	592,194
539	208,256	78,429	2,119	700	355	..	..	210	3,597	..	19	85,429	293,685
12,842	197,148	215,838	45,560	654	3,832	60,700	150	28,583	14,762	1	371	370,451	567,599
3,071	23,231	265	50	31	4	105	29	382	70	..	30	966	24,197
2,317	18,300	88	66	8	4	213	8	322	27	4	19	759	19,095
1,093	294,281	561	100,067	13	9,013	14,289	45	693	2,995	..	14	127,780	422,061
1,655	285,016	565	85,701	55	8,073	25,416	30	823	629	..	203	121,495	406,601
10	509	..	1	2	..	6	..	2,703	2	..	8	2,722	3,231
13	457	..	..	1	..	15	..	2,373	1	..	3	2,393	2,850
1,929	64,174	350	1,113	1	662	949	83	132	1,962	1	..	5,253	69,427
2,769	63,731	159	1,054	..	722	1,112	144	260	2,137	..	8	5,596	69,327
28,603*	547,527	555	736*	54,623	85	132,954	33	294,117	259	..	104,342	587,704	1,135,231
24,897	477,613	264	498	26,388	52	84,149	34	267,305	212	..	58,277	437,179	914,792
6,870	82,626	341	533	2	144	184	6,472	93	279	..	7	8,055	90,681
6,134	58,472	65	367	..	307	237	7,738	44	328	..	2	9,088	67,560
43,282	494,258	1,692	5,352	19	2,896	3,731	53,034	1,196	140,382	164	93	208,559	702,817
42,092	403,720	745	5,420	7	2,541	1,618	52,463	956	63,387	43	42	127,222	530,942
30,120	1,277,021	7,012	145,133	33	50,922	8,038	768	560	67,773	132	59	280,430	1,557,451
33,548	1,138,653	3,932	135,924	7	59,007	6,443	557	585	56,587	58	41	263,141	1,399,794
112	202,197	..	1,620	3	492	37	22	51	745	..	9	2,979	205,176
262	217,735	..	1,471	9	579	198	6	72	862	..	4	3,471	221,206
2,549	323,214	974	..	1	131,333	558	11	110	26,335	..	..	159,322	482,536
2,080	320,246	744	..	..	137,913	195	11	51	27,465	1	6	166,386	486,632
89	18,236	14	..	..	..	31	..	543	2	..	26,964	27,554	45,790
58	11,125	..	25	..	..	14	..	367	..	..	12,366	12,772	23,897
109	64,041	491	184,922	..	..	717	22	26	46,601	..	1	232,780	296,821
1,991	60,477	377	174,753	..	..	316	23	13	53,045	..	21	228,548	289,025
628	326,231	337	1,321	13	232	..	19	4,224	200	..	25	6,371	332,602
2,429	356,450	267	2,697	9	242	..	7	3,335	396	..	50	7,003	363,453
2,129	94,006	30	160	1	39	42	..	73	104	..	..	449	94,455
2,439	83,866	6	40	1	34	12	..	154	133	..	..	380	84,246
13,202	121,420	72	265	127	31	2,869	2	..	72	..	380	3,818	125,238
10,838	96,507	15	51	77	70	2,589	2	..	163	..	312	3,279	99,786
77,355	646,772	8,973	105,405	12	76,480	6,608	64	2,348	..	110	39	200,039	846,811
70,719	688,320	7,473	85,899	11	75,041	8,046	113	2,971	..	11	8	179,573	867,893
45	7,210	..	..	..	..	..	2	..	..	..	..	2	7,212
14	4,133	..	..	..	..	..	..	..	..	..	..	..	4,133
39	18,306	9	..	31,167	..	28	..	422	1	..	..	31,627	49,933
47	9,489	..	..	12,381	4	10	..	357	..	..	..	12,752	22,241
1,013	82,538	152	136	65	1,743	1,025	127	190	883	..	993	5,214	87,752
320	22,768	72	138	..	..	1,818	15	..	1,140	..	102	3,285	26,053
476	79,856	824	360	66	17	157	17	585	163	..	226	2,415	82,271
535	76,859	625	241	72	61	154	16	637	145	..	60	2,011	78,870
45,606	700,491	1,502	2,664	203	200	4,881	3,007	3,892	1,026	12,987	1,251	31,713	732,204
14,482	563,040	614	3,406	70	683	5,654	1,859	4,681	759	21,142	1,613	40,486	603,526

† Included against Madras.
Western India States Agency.
They are shown in Subsidiary Table IV of this Chapter.

SUBSIDIARY

Variation as compared with previous Censuses in the

	Contiguous						
	Nepal.				Afghanistan.		
	1931.	1921.	1911.	1901.	1931.	1921.	1911.
1	2	3	4	5	6	7	8
INDIA	**327,028**	**273,932**	**280,241**	**243,037**	**81,053**	**47,835**	**91,630**
Provinces	**312,438**	**251,432**	**253,248**	**241,452**	**78,408**	**46,939**	**89,679**
1. Ajmer-Merwara	49	34	17	9	65	190	134
2. Andamans and Nicobars	3	10	14	9	..	9	34
3. Assam	88,306	70,344	47,654	21,347	1,346	360	667
4. Baluchistan	3,868	2,455	1,677	6	14,953	5,285	10,625
5. Bengal	98,620	87,283	106,727	161,495	3,837	1,795	2,710
6. Bihar and Orissa	36,586	30,454	35,954		1,423	687	657
7. Bombay*	1,323	1,574	507	213	10,762	4,238	8,237
8. Burma	23,889	13,712	5,997	3,910	132	77	109
9. Central Provinces and Berar	683	88	253	87	834	454	1,064
10. Coorg	..	..	..	3	2	..	..
11. Madras	217	61	18	77	306	77	118
12. North-West Frontier Province	8,051	5,877	5,653	7,711	28,324	22,098	42,480
13. Delhi	427	133	5,430		184	86	21,239
14. Punjab (*including Agency*)	6,922	4,780			14,854	10,603	
15. United Provinces of Agra and Oudh	43,494	34,627	43,347	46,585	1,386	980	1,605
States and Agencies	**14,590**	**22,500**	**26,993**	**1,585**	**2,645**	**896**	**1,951**
16. Baroda State	239	28	49	14	122	78	87
17. Central India Agency	266	191	88	73	216	168	178
18. Gwalior State	56	19			52	44	
19. Cochin State	2	..	..	10	3	..	..
20. Hyderabad State	14	47	19	25	181	125	468
21. Jammu and Kashmir State	974	1,157	1,077	1,384	1,607	329	943
22. Mysore State	25	12	9	8	78	16	24
23. Rajputana Agency	230	170	140	56	260	133	243
24. Sikkim State	12,571	20,876	25,610	†	1	3	2
25. Travancore State	1	..	1	15	24	..	6
26. Western India States Agency	212	..	..	..	101	..	..

	British Isles.						
	1911.			1901.			
	Persons.	Males.	Females.	Persons.	Males.	Females.	1931.
1	24	25	26	27	28	29	30
INDIA	**121,357**	**101,980**	**19,377**	**96,653**	**81,990**	**14,663**	**13,360**
Provinces	**109,483**	**91,860**	**17,623**	**84,933**	**72,222**	**12,711**	**12,200**
1. Ajmer-Merwara	1,223	1,099	124	576	474	102	59
2. Andamans and Nicobars	181	163	18	190	177	13	3
3. Assam	1,427	1,119	308	1,287	1,080	207	187
4. Baluchistan	3,287	2,908	379	2,820	2,636	184	146
5. Bengal	12,179	9,355	2,824	11,886	9,290	2,596	1,334
6. Bihar and Orissa	2,572	1,859	713				399
7. Bombay*	19,682	16,647	8,035	15,753	13,275	2,478	4,964
8. Burma	7,354	6,279	1,075	5,690	5,057	633	897
9. Central Provinces and Berar	4,846	4,275	571	3,537	2,286	1,251	182
10. Coorg	82	58	24	99	62	37	8
11. Madras	6,497	4,908	1,589	5,994	4,874	1,120	1,809
12. North-West Frontier Province	4,836	4,390	446	21,690	19,471	2,219	222
13. Delhi	23,311	19,954	3,357				73
14. Punjab (*including Agency*)							1,435
15. United Provinces of Agra and Oudh	22,006	18,846	3,160	15,411	13,540	1,871	483
States and Agencies	**11,874**	**10,120**	**1,754**	**11,720**	**9,768**	**1,952**	**1,160**
16. Baroda State	55	35	20	22	12	10	16
17. Central India Agency	3,192	2,841	351	3,255	2,767	488	62
18. Gwalior State							13
19. Cochin State	20	14	6	26	16	10	30
20. Hyderabad State	3,790	3,359	431	5,728	4,929	799	460
21. Jammu and Kashmir State	109	69	40	92	45	47	36
22. Mysore State	3,939	3,289	650	2,100	1,661	439	350
23. Rajputana Agency	521	342	179	255	170	85	34
24. Sikkim State	11	11	..	†	†	†	2
25. Travancore State	237	160	77	242	168	74	126
26. Western India States Agency	..	..	..	..	..	..	31

* Figures in the 1931 columns refer to Bombay *plus* Aden.

NOTE.—(*i*) 1901 figures below Afghanistan include those of Yaghistan.

TABLE III.

number of Immigrants from certain foreign countries.

Countries.	China.				Japan.				Distant Countries. British Isles. 1931.			1921.		
1901.	1931.	1921.	1911.	1901.	1931.	1921.	1911.	1901.	Persons.	Males.	Females.	Persons.	Males.	Females.
9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
115,908	**120,745**	**108,495**	**80,282**	**46,831**	**2,334**	**1,867**	**1,261**	**353**	**104,729**	**82,363**	**22,366**	**115,606**	**92,602**	**23,004**
112,977	**120,639**	**108,431**	**80,238**	**46,785**	**2,274**	**1,798**	**1,248**	**348**	**96,677**	**75,978**	**20,699**	**104,267**	**83,392**	**20,871**
120	6	9	1	1	..	..	2	1	1,207	1,023	184	1,065	916	149
32	179	428	35	1	135	3	..	..	145	133	12	133	121	12
1,101	640	183	270	134	1	..	..	..	2,341	1,722	619	4,714	1,275	439
3,525	34	7	8	..	1	3	7	..	3,936	3,204	732	4,109	3,620	489
4,363	3,507	3,856	3,087	2,321	538	384	146	16	12,223	8,237	3,986	12,453	9,245	3,208
	30	136	20		2	2	9		3,014	2,118	896	3,272	2,354	918
12,513	718	793	513	297	869	813	328	187	11,381	8,369	3,012	20,370	16,386	3,984
253	114,270	102,344	75,365	43,328	570	449	666	100	6,201	4,837	1,364	6,097	4,735	1,362
839	31	16	35	16	18	5	4	7	4,024	3,254	770	3,680	3,050	630
2	1	..	1	1	..	..	..	..	64	36	28	73	48	25
100	95	133	148	42	90	108	30	33	5,716	4,174	1,542	5,435	3,397	2,038
89,128	23	15	8	..	2	..	..	2	10,336	9,401	935	9,691	8,680	1,011
	29	3	595	456	2	..	12		3,063	2,357	706	2,835	2,426	409
	963	423			17	3			15,554	12,423	3,131	16,068	13,003	3,065
1,001	113	85	152	188	29	28	44	2	17,472	14,690	2,782	17,272	14,136	3,136
2,931	**106**	**64**	**44**	**46**	**60**	**69**	**13**	**5**	**8,052**	**6,385**	**1,667**	**11,339**	**9,210**	**2,129**
155	3	2	..	11	44	..	..	..	72	55	17	50	29	21
186	36	11	..	1	..	2	4	..	1,898	1,577	321	2,773	2,440	333
			..		..	1			43	31	12	551	490	61
2	2	..	..	..	1	..	..	..	38	22	16	27	20	7
886	13	7	..	2	12	31	3	..	2,088	1,944	144	3,395	2,863	532
1,347	5	8	2	15	..	..	..	..	147	64	83	148	68	80
21	25	16	18	12	3	5	4	..	2,812	2,061	751	3,831	2,935	896
308	2	1	8	1	..	..	1	..	406	257	149	347	210	137
†	15	9	15	†	..	..	..	†	3	2	1	8	6	2
26	2	10	1	4	..	30	1	5	377	263	114	209	149	60
..	3	..	..	..	..	..	..	..	168	109	59	..	..	..

Distant Countries. Other European Countries.			Africa.				America.				Australasia.			
1921.	1911.	1901.	1931.	1921.	1911.	1901.	1931.	1921.	1911.	1901.	1931.	1921.	1911.	1901.
31	32	33	34	35	36	37	38	39	40	41	42	43	44	45
5,458	**8,546**	**7,930**	**11,408**	**4,719**	**3,767**	**8,293**	**4,455**	**3,446**	**2,750**	**2,069**	**1,516**	**1,683**	**1,266**	**646**
4,785	**7,805**	**7,401**	**8,187**	**4,245**	**3,214**	**8,193**	**4,099**	**3,174**	**2,495**	**1,992**	**1,406**	**1,507**	**1,206**	**610**
45	43	17	40	20	9	3	10	8	9	5	10	4	12	7
6	1	2	3	1	..	1	3	5	3	3	8	15	2	..
46	69	53	76	10	14	15	110	97	58	49	28	37	25	20
32	36	36	29	18	8	15	41	32	37	9	15	16	19	5
903	1,323	1,449	112	134	232	170	393	407	312	370	143	422	306	195
197	289		43	17	30		230	179	66		30	40	40	
1,500	2,233	3,070	4,764	2,260	1,503	7,007	999	455	277	340	303	177	149	10
456	983	639	173	70	53	58	489	559	403	211	168	214	205	48
493	286	239	87	75	46	17	279	374	145	93	21	51	60	16
10	13	14	7	2	3	2	5	3	2	2	2	4	2	..
599	1,412	987	1,779	737	893	672	497	261	255	212	149	107	97	92
12	55	536	46	16	24	87	44	5	26	273	38	20	28	92
76	595		28	63	122		55	24	267		17	13	107	
205			657	583			319	307			121	136		
205	467	359	343	239	277	146	625	458	635	425	353	251	154	125
673	**741**	**529**	**3,221**	**474**	**553**	**100**	**356**	**272**	**255**	**77**	**110**	**176**	**60**	**36**
14	15	11	938	371	257	23	15	21	12	2	1	..	..	..
55	91	113	22	9	129	13	88	72	89	12	9	11	8	8
20			..	8			19	13			..	20		
18	30	7	5	..	..	2	3	3	3	2	2	4	1	..
149	146	101	4	10	98	16	92	48	40	19	21	88	11	..
10	17	18	9	8	6	8	12	8	10	2	17	4	1	2
218	324	206	167	55	46	18	63	77	76	27	30	36	34	16
28	40	23	28	7	16	16	23	26	16	9	11	11	4	6
3	3	†	..	..	..	†	1	..	..	†	1	..	..	†
158	75	50	29	6	1	4	32	4	9	4	16	2	1	4
..	..	..	2,019	..	..	..	8	..	..	..	2	..	..	..

† Included in Bengal.

(ii) The figures against Bombay for the years 1901-21 are inclusive of those for the Western Indian States Agency.

SUBSIDIARY TABLE IV.

Number of Indians born in India who were enumerated in Great Britain and the Colonies during the period 1926 to 1931.

Colony where enumerated.		Total Born in India.			Details by Provinces, States and Agencies.												Number of Natives of India in Colony irrespective of Birth-place.		
					Bengal.		Bombay.		Madras.		Punjab.		Other Provinces and States.‡		India Unspecified.				
		Persons.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Persons.	Males.	Females.
1		2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
Total		656,709*	477,465	178,911	4,627	952	6,518	2,679	54,744	9,608	4,357	304	8,656	855	398,563	164,513	1,304,400	813,143	491,257
Europe	England and Wales	7,129	6,844	285	2,189	40	851	78	342	40	1,062	26	1,779	88	621	13	7,129†	6,844	285
	Gibraltar	56	56	..	..	..	56	..	..	..	..	..	..	..	..	..	56†	56	..
	Irish Free State	1,989	919	1,070	..	..	..	..	..	..	..	..	..	..	919	1,070	1,989†	919	1,070
	Malta	40	37	3	..	..	..	..	..	..	..	..	..	..	37	3	43	38	5
	Northern Ireland	1,003	485	518	..	..	..	..	..	..	..	..	..	..	485	518	1,003†	485	518
	Scotland	2,003	1,986	17	614	1	257	4	79	5	374	..	353	4	309	3	2,003†	1,986	17
Asia	Ceylon	71,165	61,022	10,143	77	15	644	210	53,179	8,999	107	25	6,237	723	778	171	80,721	66,141	14,580
	Cyprus	3	3	..	1	..	..	..	..	..	2	..	..	..	..	..	4	3	1
	Hong Kong	3,823	3,553	270	46	5	80	18	5	2	2,495	154	169	3	758	88	4,745	3,989	756
	Malaya (British)	492,504	352,634	139,870	..	..	..	..	..	..	..	..	..	..	352,634	139,870	624,009	421,028	202,981
	North Borneo	610	538	72	13	..	15	3	93	21	225	28	31	2	161	18	1,206	843	363
	Palestine	40	25	15	..	..	..	..	..	..	..	..	..	..	25	15	60	34	26
Africa	Egypt	539	465	74	..	..	..	..	..	..	..	..	..	..	465	74	821	623	198
	Gold Coast Colony	56	56	..	..	..	52	..	1	..	1	..	..	..	2	..	56†	56	..
	Mauritius	6,829	4,557	2,272	1,684	891	568	248	1,008	533	..	..	..	..	1,297	600	268,870	139,668	129,202
	Nigeria	32	32	..	..	..	..	..	..	..	..	..	..	..	32	..	32†	32	..
	North Rhodesia	127	116	11	..	..	94	9	12	1	2	1	2	..	6	..	171	139	32
	Nyasaland	1,405	1,252	153	..	..	..	..	..	..	..	..	..	..	1,252	153	1,509	1,306	203
	Seychelles	333	..	..	4		78		229		..	..	8		14		503	398	105
	Sierra Leone	19	19	..	..	..	19	..	..	..	..	..	..	..	..	..	25	22	3
	Somaliland	234	166	68	2	..	44	17	18	6	18	10	84	35	..	..	520	310	210
	Sudan	421	316	105	..	..	..	..	..	..	..	..	..	..	316	105	525	368	157
	Tanganyika	13,742	9,242	4,500	..	..	..	..	..	..	..	..	..	..	9,242	4,500	23,422	14,177	9,245
	Zanzibar	6,050	3,899	2,151	..	..	3,828	2,091	..	..	71	60	..	..	..	..	15,246	9,955	5,291
America	British Guiana	23,236	14,447	8,789	..	..	..	..	..	..	..	..	..	..	14,447	8,789	130,540	69,729	60,811
	British Honduras	45	39	6	..	..	..	..	..	..	..	..	..	..	39	6	497	266	231
	Trinidad	23,255	14,738	8,517	..	..	..	..	..	..	..	..	..	..	14,738	8,517	138,667	73,704	64,963
Australasia	Fanning Islands	2	2	..	..	..	1	..	1	..	..	..	..	..	..	..	4	4	..
	Gilbert Islands	1	1	..	1	..	..	..	..	..	..	..	..	..	..	..	1†	1	..
	Tongan Islands	18	16	2	..	..	9	1	6	1	..	..	1	..	..	..	23	19	4

*The details in columns 3 and 4 do not work up to the total in column 2, as the sex details of emigrants to Seychelles are not available.

No information as to the number of persons born in India and enumerated in Colonies not scheduled in this table is available.

† (Columns 17—19).—In the absence of detailed information the figures in columns 2—4 have been repeated.

‡ (Columns 13 and 14).—Includes Andamans and Nicobars (1), Assam (965), Baluchistan (8), Bihar and Orissa (160), Burma (171), C. P. and Berar (115), Coorg (2), Delhi (51), N.-W. F. Province (211), United Provinces (503), Baroda (26), Central India (28), Cochin (2,450), Gwalior (14), Hyderabad (254), Jammu and Kashmir (65), Mysore (258), Rajputana and Ajmer-Merwara (55), Sikkim (1), Travancore (3,403) and the Western India States Agency (660).

SUBSIDIARY TABLE V.

Number of Emigrants to Colonies, etc., who were registered at the ports of Calcutta, Madras, Bombay and Karachi during the decade 1921 to 1930.

Colony, etc.	Emigrants who embarked on the various Colonies from				Emigrants who returned from the various Colonies to			
	Calcutta.	Bombay.	Madras.	Karachi.	Calcutta.	Bombay.	Madras.	Karachi.
Ceylon	..	..	1,159,010	..	..	..	703,715	..
Fiji	..	..	..	..	13,214	..	3,459	..
British Guiana ..	..	..	..	..	4,478	..	314	..
Jamaica	..	..	..	..	2,765	..	177	..
Malaya and Straits Settlements ..	..	..	721,959	..	..	..	132,342	..
Mauritius	1,428	..	..	..	944	1,292	642	..
Natal	..	..	..	..	3,735	..	10,027	..
Sarawak	2	..	..	..	..	..	..	..
Siam (Bangkok) ..	79	..	..	..	102	..	..	..
Surinam	..	..	..	..	1,101	..	..	..
Trinidad	..	..	..	..	8,947	..	644	..
Other Ports ..	..	5,595	225,025	1,638	16	4,996	238,091	46
Total ..	1,509	5,595	2,105,994	1,638	35,302	6,288	1,090,412	46

Principal birth districts of Emigrants from Calcutta and Madras.			
Madras			
Trichinopoly	267,053	Tinnevelly ..	26,134
Salem ..	156,200	Coimbatore ..	25,845
North Arcot	152,147	Chittoor ..	21,042
Tanjore ..	105,573	Vizagapatam	14,674
Madura ..	84,219	Nellore ..	5,013
South Arcot	72,914	South Kanara	1,791
Chingleput ..	59,055	Guntur ..	1,617
Ramnad ..	50,383	Kistna ..	1,598
Malabar ..	38,445	Godavari ..	1,112
Pudukottai State ..	..	..	42,597
Travancore ..	..	..	2,501
Bengal	..	..	1,676*
Mysore	..	..	1,383

*Includes certain persons who did not embark owing to sickness or other causes.

SUBSIDIARY TABLE VI.

Actual and Natural Populations.

Province, State or Agency.	Actual Population at Census.	Immigrants (Persons born elsewhere but enumerated in Province or State).	Persons born in Province but enumerated in other Parts of India.	Persons born in Province or State but enumerated outside India.	Natural Population (Persons born in Province or State irrespective of the place of emigration).
1	2	3	4	5	6
INDIA	352,837,778	730,562	..	656,709*	352,763,925
Ajmer-Merwara	560,292	106,444	60,909	†	514,757
Andamans and Nicobars	29,463	14,745	552	1	15,271
Assam	9,247,857	1,408,763	73,036	965	7,913,095
Baluchistan	868,617	90,053	42,763	8	821,335
Bengal	51,087,338	1,853,708	954,434	5,583	50,193,647
Bihar and Orissa	42,329,583	509,837	1,758,130	160	43,578,036
Bombay (*including Aden*) ..	26,398,997	1,250,461	592,194	9,275	25,750,005
Burma	14,667,146	775,963	24,197	171	13,915,551
Central Provinces and Berar ..	17,990,937	655,574	422,061	115	17,757,539
Coorg	163,327	38,718	3,231	2	127,842
Delhi	636,246	263,188	69,427	51	442,536
Madras	47,193,602	267,195	1,135,231	64,581	48,126,219
North-West Frontier Province ..	4,684,364	159,166	90,681	211	4,616,090
Punjab (*including Agency*) ..	28,490,857	674,152	702,817	4,661	28,524,183
United Provinces..	49,614,833	559,605	1,557,451	503	50,613,182
Baroda State	2,443,007	324,579	205,176	26	2,323,630
Central India Agency	6,632,790	600,766	482,536	28	6,514,588
Cochin State	1,205,016	87,417	45,790	2,450	1,165,839
Gwalior State	3,523,070	281,550	296,821	14	3,538,355
Hyderabad State	14,436,148	247,795	332,602	254	14,521,209
Jammu and Kashmir State ..	3,646,243	64,196	94,455	65	3,676,567
Mysore State	6,557,302	344,592	125,238	258	6,338,206
Rajputana Agency	11,225,712	330,939	846,811	55	11,741,639
Sikkim State	109,808	15,417	7,212	1	101,604
Travancore State..	5,095,973	135,103	49,933	3,403	5,014,206
Western India States Agency ..	3,999,250	109,674	293,685	660	4,183,921

*Includes 563,208 persons who failed to make the return of birth place.
† Included in Rajputana.

CHAPTER IV

Age.

The returns of age.

68. The returns of age will be found tabulated by sex and civil condition in Tables VII and VIII of part II of this volume. Table VII gives particulars for the whole population by annual groups from 0 to 5 and thereafter in quinquennial groups for India and for provinces and states separately, followed by tables for cities in decennial groups. Table VIII gives returns for selected castes as first sorted into alternate ternary and septenary groups without the adjustment applied to the ages in Table VII. The enumerators at the 1931 census were instructed to record age not as hitherto in terms of the number of years completed but as age at the nearest birth-day. The discrepancy which on the face of it would be involved between the figures of the 1931 and all previous censuses is more theoretical than real. Ignorance of precise age is almost universal in India and the probability is that the returns of age given at the 1921 and the previous censuses were just as nearly the returns of age for the nearest birth-day as the returns of completed years. In fact it is the belief that the age obtained by the enquiries made at previous censuses is more likely to have represented age to the nearest birth-day than the number of completed years, that has caused the change in the instructions to enumerators. In any case the Indian age returns are admitted on all hands to be extremely inaccurate, and even if the practice of recording as *nil* the ages of infants under six months, which the return of age at the nearest birth-day involves, be regarded as an absurdity, it is certainly no worse than the conflicting instructions of previous censuses under which (1) all children under one year were returned as infants and (2) all children whose names could not be stated were likewise returned as infants. A taboo on children's names is a common thing in India, but it is by no means one which ceases when the child reaches one year of age and the result at previous censuses has been, whether or no caused by this instruction, greatly to swell the numbers of infants under one year of age at the expense of infants over one year, an inflation which is liable to be increased by the addition of the survivors of births occurring between the preliminary and final enumeration, a space of time which may vary from a day or two to as much as a couple of months. This latter inflation is, however, a recurrent feature of the Indian census and the comparative value of the figures from 0–1 is not affected. The misstatement of the age of infants naturally appears at its maximum in the ages from 1–2, as indeed would appear to have been the case in 1911 in the United Kingdom also, while there is comparatively little understatement of the ages of children of 2–3 years, and from three to five the tendency seems to be rather to overstate than understate the age. In pointing out this tendency the Census Commissioner of Gwalior State says that it was brought first to his notice when dealing with the fertility and fecundity schedules, in the returns on which it was common to find women who said they had been married four years but had three children whose ages they gave as 5, 3 and 1 year. Further the abovementioned taboo would not be merely on uttering the name. It would much more often than not, in all probability, be unlucky for an infant to be shown to a strange enumerator, who may therefore have as his only guide the statement of a mother whose ideas of the passage of time are of the vaguest possible. Another attitude is illustrated by the Madras Census Superintendent :—

"A Salem ..... father, challenged about the absence from his account of persons present of any indication of a very recent arrival, said with some surprise : 'It is but now born ! Do you count it ?' ".

He continues "When one reflects on conditions in India it is difficult to place any serious value on the change and I could detect among supervisors a not infrequent wonder that it should be thought worth while to particularize on the day of birth at all when in the vast majority of cases the month is unknown and in most cases the year, while the lustrum and even the decade must frequently be a guess ..... A peculiar difficulty arose from the fact that in parts of Malabar the equivalent Malayalam in common use for both 'nearest' and 'next' was the same. This was met by special instructions but illustrates well the difficulties of a polyglot census."

Misstatements of Age.

69. Apart from ignorance there are many reasons which appear to operate towards a deliberate misstatement of age at the census return. This is particularly the case with unmarried girls who have reached puberty. It is invariably found that the age-period of girls from 10–15 is defective in numbers and this is no doubt justly put down in part at any rate to the unwillingness of better caste Hindus, particularly Brahmans, to admit to having unmarried daughters already pubescent, who should therefore be already married in accordance with the injunctions or at least the strong recommendations of the Smritis. It may, however, be also due to short enumeration as a result of secrecy, and indeed the actuary who examined the 1921 census returns felt so convinced of actual shortage of enumeration, as distinct from misstatement of age, at the period about 15 years that it was partly for that reason that he was unwilling to work out any table for the expectation of life, which he considered would be vitiated by short enumeration at that age. A possible explanation is, in the case of females, to be found in the practice in several parts of India of secluding girls at the age of puberty; for at any rate certain castes consider it necessary to shut up and conceal pubescent girls independently of any shame at their being unmarried. Thus Dāsaris, Dhangars and Killekyatas seclude girls at puberty for 3 to 8 days, and Jains from 9 to 15 days. This seclusion of girls when they reach the age of puberty is probably part of a widely spread custom which may be observed also in Africa and in Oceania. At the same time it is more than doubtful if there is any general shortage of enumeration as suggested by the actuary, and it is clear from the returns that the ages of males are similarly misstated at that period; this the actuary, in 1921, attributed to the desire to appear either definitely as a boy or definitely as a man, and it is possible that the practice of early marriage results in some exaggeration of the ages of those just married and a corresponding understatement of the ages of those who are not. In the case of males later in life there is apparently a tendency for widowers and bachelors who are becoming elderly to understate their ages, particularly if they are wishful to remarry. On the other hand the Indian age returns do not appear to suffer from any understatement in the ages of adult women, though recently married girls, and particularly those who are mothers, tend to overstate their age, or rather to have their age overstated for them, no doubt since a matron's position gives an impression of age which is not necessarily a true one, particularly in a country in which women are married when exceptionally young. In the case of the old it is a natural tendency on the part of both sexes to exaggerate, and women in particular, being very ignorant of the periods which mark the passage of time, are inclined to give the most wild statements as to their age; in fact as a magistrate in court the writer has heard a woman of about 35 to 40 years, who gave her age as 100 years and caused a titter at the bar, hurriedly restate it as 200 years. The enumerators, it is true, were instructed to correct ridiculous returns of age, but it may be doubted whether they were in all cases competent to do so. The fact that the average life in India is shorter than in the West possibly encourages exaggeration in the eyes of those who do pass their allotted three score years and ten, and this tendency is in some places likely to be encouraged by the practice of performing a ceremony to celebrate the attainment of sixty years of life. Obviously a guess is least inaccurate in the case of the young, where the margin for variation is least, and most inaccurate for the aged, where an error of even twenty years may be difficult to detect.

Another reason for the misstatement of the correct age is a superstitious belief that it is unwise to state one's age correctly, as this is liable to reduce one's length of years. The *Niti Shashtra* apparently lays down that a man's age is one of the nine things which he must carefully conceal; such beliefs are probably dying out, but they probably die extremely hard and they are not peculiar to India. Another point which affects all ages returned at the census is the practice common, if not general, in India of reckoning age from the time of conception and not from that of birth, while yet another element of inaccuracy is to be found in curious methods of reckoning periods of time; thus a common method in the Assam hills is to reckon by harvests. A child born in September would have his age stated in November as one year and in the following November as two years old, a form of reckoning which is also applied to events so that an event which took place just over a year previously would be said to have been taken place two years ago on the ground that two harvests had intervened. The error arising from a

practice of this kind would be insignificant when applied to mature years, were it not for the fact that later on the computation is made not by harvests but by the harvesting of a particular plot; a man will remember that within his knowledge such and such plots have been harvested so many times and that the normal cycle of cultivation is, say, seven years (reference is of course not to permanently cultivated but periodically cultivated *jhum* lands); this will give a fair approximation to his real age, provided the cycle of cultivation remains at seven years. There is no certainty, however, that it may not have been 20 years and been gradually reduced with the result that it very much distorts the return of age given.

It is possible that deliberate misstatements of age could be reduced if the persons enumerated could be made to appreciate the fact that their names are eliminated from the returns at the first stage of compilation and that their individual ages are merged into groups. Such confidence, however, is at present wanting, nor was the legislative protection given to the privacy of returns enough to prevent attempts being made to use census schedules as evidence of age in courts of law, and as long as there is that possibility the necessary confidence is certain to be absent.

Ignorance is, however, the principal reason for the inaccuracy of the age returns, and the Census Superintendent of Central India may here be quoted :—

"The Hindus have the custom of casting horoscopes but they are never produced before the enumerator. A horoscope may not often show the true age. It is easily recast to suit one's needs especially of a matrimonial nature and at times it is re-edited when lowering of age is required while seeking Government service ..... The vast majority are both indifferent and ignorant towards the question. Ignorance is natural in a population which is illiterate and which never keeps any document. Indifference arises from the outlook on life. The average man or woman in India matures early and is short-lived. Life presses heavily on them and fatalism overpowers them. Childhood, adolescence, middle life and old age, are well-marked stages in life and the Hindu social system has laid down conduct of life and has prescribed rules for the observance of customs and practices. It matters not if the precise age is not known. Apart from any question of reticence, the villager will stare at what he deems an irrelevant enquiry when you ask him to state his age; will hesitate; will sometimes ask 'Is it my age ?' and when pressed will return some absurd answer especially if he is over 45 or 50. So the age recorded in the Census is the one guessed either by the enumerated or the enumerator. If our enumerator is somewhat conscientious he would ask a person when he took to the plough or how old he was when the great famine of 1899 broke out. He may in such cases approach to a nearer approximation. By far the heaviest burden that falls on the enumerator is to guess the age of practically everyone in his block. In the tribal areas, it is a matter of great difficulty to make the tribes return any age at all for many of them are not used to counting. A local event such as a Raja's marriage or installation was usually a serviceable guide to the enumerator in fixing the age according to his judgment."

The Madras Census Superintendent writes of—

"The peculiarly practical and realist outlook on life of the average Indian, who yet is often thought to be impractical and visionary. After all, years are a mere convenience for reckoning; to exalt them into an absolute standard as is done in western countries, is to give them an undue importance. Capacity is what matters. Thus to the Indian our application of age-limits to govern retirement and general insistence on birth certificates seem probably to show a defective and—to use a popular word in India—bureaucratic attitude towards life."

Preferential Digits.

70. Again, the age returns of past censuses have made it quite clear that adult Indians have a very marked preference for certain particular digits. This was effectively demonstrated by the Actuary to the Government of India in his Report on the 1921 census, the preference taking the following order :—0, 5, 2, 8, 4, 6 and then the odd numbers 3, 7, 1, 9. With reference to this the Actuary wrote as follows :—

"The method of grouping ages previously adopted, namely, the method by which the numbers living at ages which are multiples of 5 were always treated as the youngest in each group, and with ages stated as age last birthday, produced less accurate results than would be obtained by any other method for which the smallest semblance of justification could be advanced".

As an illustration of the effect on the age returns of this preference for certain digits the accompanying histogram has been compiled on the actual age returns in 1931 of 100,000 of each sex from Madras Presidency. A glance is enough to show that such returns cannot possibly represent the real age distribution of the population.

Formation of age groups.

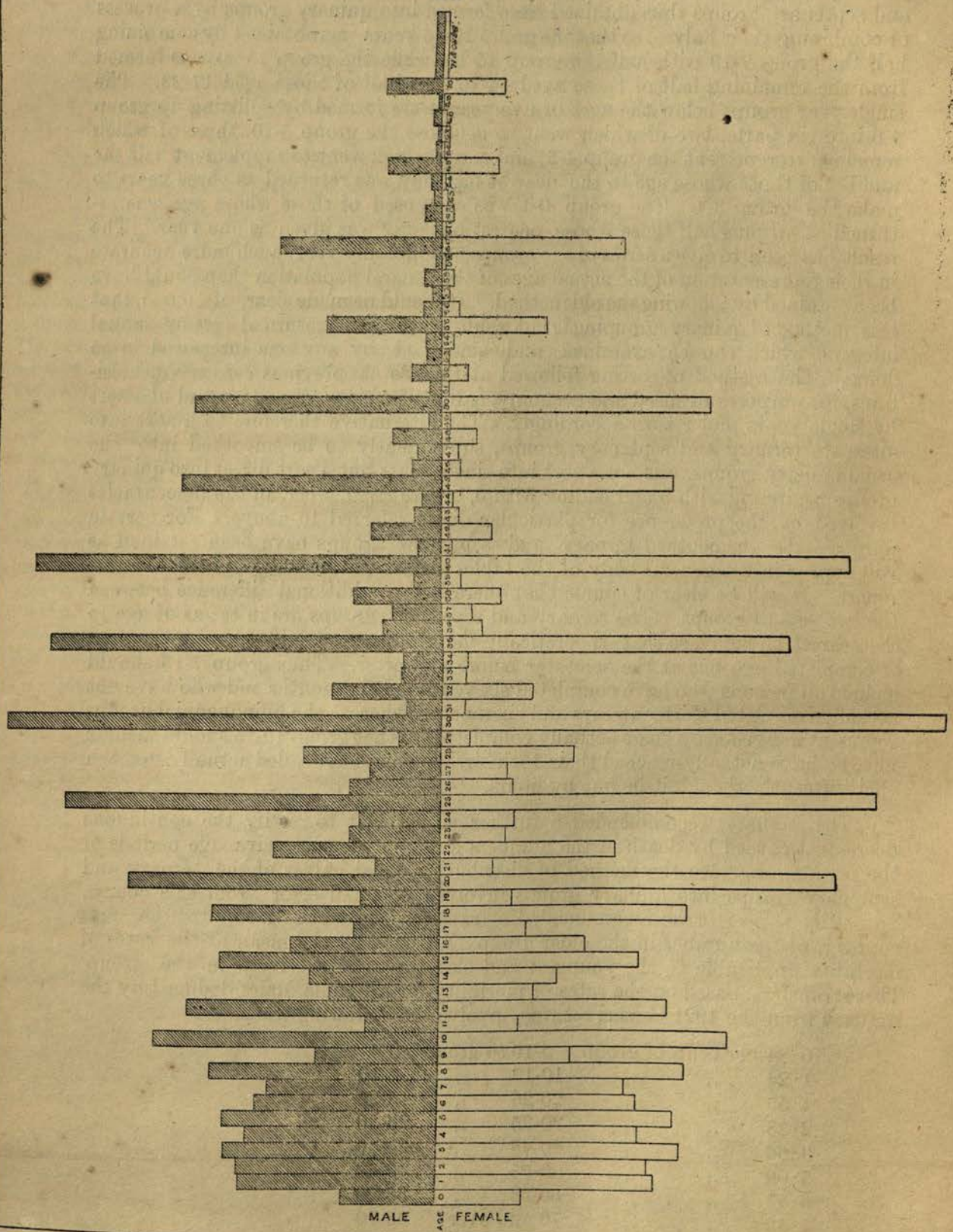
71. In view of this criticism on the Indian Census practice of throwing all ages returned into quinary groups beginning with the digits 0 or 5, it was decided not only to have age returned as 'age at the nearest birthday' instead of as the number of years completed, but to recast the system of obtaining the quinary groups in the way recommended by the Actuary. The method which he recommended, and which has been followed at this census, was to group the ages from 4 upwards into alternate groups of three and seven. Thus the years 4, 5 and 6 form the first ternary group which is followed by a septenary group of the years 7-13. In this way the favourite digit '0' forms the centre of one group, the next favourite digit '5', the centre of the other. The actual limits of age corresponding to these two groups, assuming that the returns are perfectly correct, would be 3½ to 6½ years in the first case and 6½ to 13½ years in the second case. The alternate ternary and septenary groups thus obtained were formed into quinary groups by a process of combining their halves, so that the group 10-15 years was obtained by combining half the group 7-13 with half the group 14-16, while the group 15-20 was formed from the remaining half of those aged 14-16 plus half of those aged 17-23. The single year groups below the ages of five years were formed by splitting up group 4-6 into six parts, two of which went to compose the group 5-10, three of which remained to represent the group 4-5, and one of which went to supplement half the number of those whose age to the nearest birthday was returned as three years to make the group 3-4. The group 0-1 was composed of those whose age was returned as *nil* plus half those whose nearest birthday was given as one year. The result has been to give a series of age groups undoubtedly very much more accurate in their representation of the actual ages of the general population than could have been obtained by following the old method. It should be made clear, of course, that this method of quinary grouping is not a substitute for the return of ages by annual integers, which can be examined and smoothed by any one interested in so doing. The method of sorting followed at this as at previous censuses necessitates, for purposes of speed and economy, a direct sort into groups instead of a sort by single years and return accordingly. The alternative therefore to a sort into alternate ternary and septenary groups, subsequently to be smoothed into the usual quinary groups, was not a sort into single years but a sort direct into quinary groups beginning with 5 and ending with 0, or *vice versa*, with all the inaccuracies involved by the preference for particular digits referred to above. For certain purposes the unsmoothed ternary and septenary groups have been retained as will appear in the general body of the tables and as will be indicated later in this report. It will be clear of course that there is this additional difference between the two sets of groups. The ternary and septenary groups are in terms of age to the nearest birthday, so that theoretically the groups are divided not at the year of completed age but at the semester before and after. Thus group 7-13 should include all persons who have completed six years and six months and who have not actually completed thirteen years and six months, whereas the quinquennial groups represent a division by years actually completed, so that group 10-15 should include all who have actually reached their 10th birthday and have failed actually to reach their fifteenth, though it be but by hours.

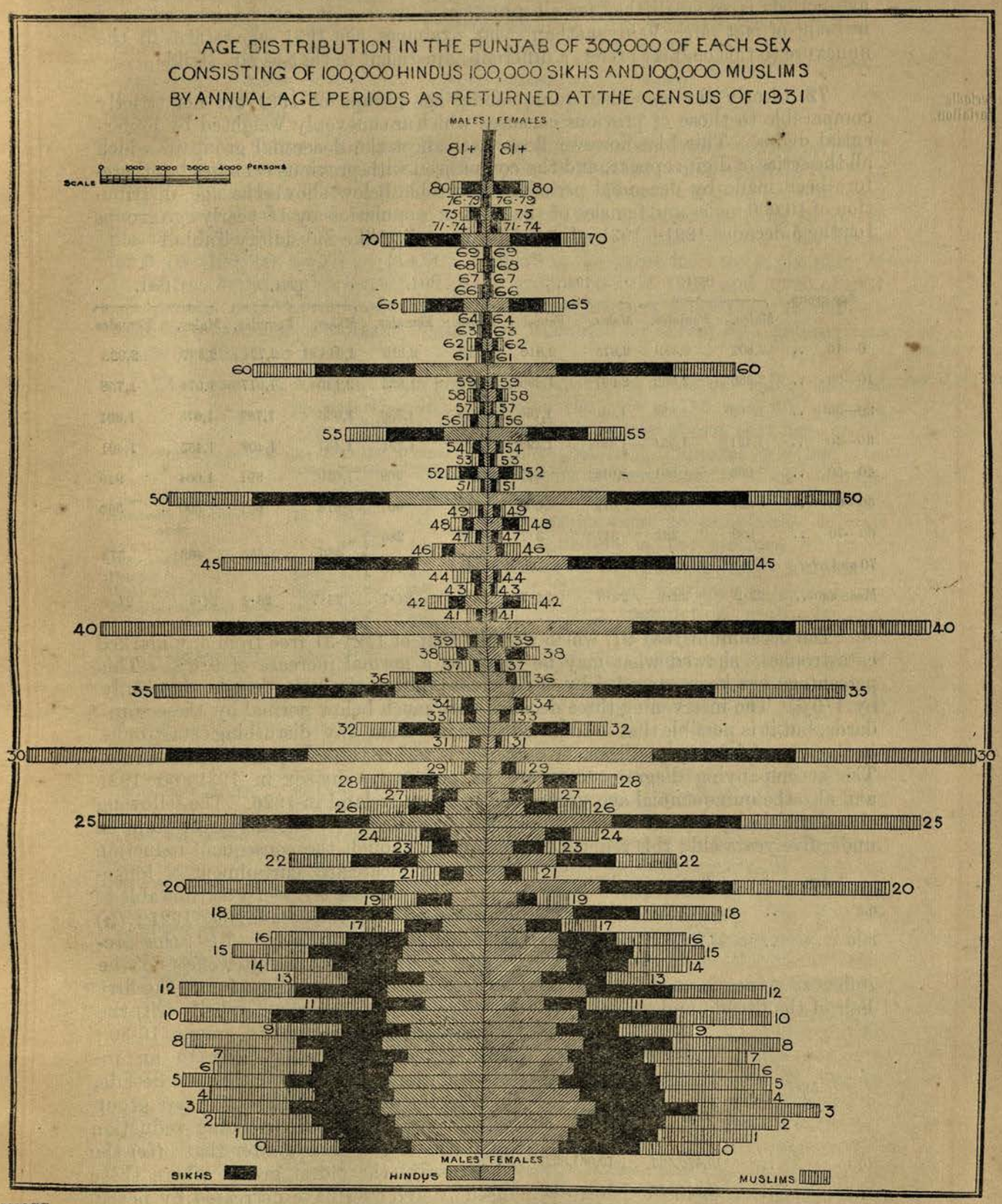
The Actuary recommended a further adjustment to rectify the continuous decrement caused by death in the numbers living in the successive age periods of the population, since the method of distributing equal halves of the ternary and septenary groups into quinary groups involved a small error from this course. To rectify this error he recommended a transfer, from each group to the next younger, of the number in the older group multiplied by the mean of the rates of mortality applicable to the youngest and oldest ages respectively in the group. These transfers, based on the rates of mortality for All-India Males deduced by the Actuary from the 1921 Census returns, involve the following transfers :—

0·84	per cent.	of group	5-10	to group	0-5
1·24	,,	,,	10-15	,,	5-10
1·55	,,	,,	20-25	,,	15-20
2·38	,,	,,	30-35	,,	25-30
3·66	,,	,,	40-45	,,	35-40
5·09	,,	,,	50-55	,,	45-50
6·87	,,	,,	60-65	,,	55-60
7·43	,,	,,	70 and over		65-70

HISTOGRAM OF AGE-RETURNS OF 100,000 MALES AND 100,000 FEMALES FROM MADRAS SHOWING HOW CRUDE AGE RETURNS ARE INACCURATELY WEIGHTED BY THE PREFERENCE SHOWN FOR CERTAIN DIGITS

1951




AGE DISTRIBUTION IN THE PUNJAB OF 300,000 OF EACH SEX
CONSISTING OF 100,000 HINDUS 100,000 SIKHS AND 100,000 MUSLIMS
BY ANNUAL AGE PERIODS AS RETURNED AT THE CENSUS OF 1931
MALES | FEMALES
SCALE 0 1000 2000 3000 4000 PERSONS
81+ 81+
76-79 76-79
71-74 71-74
MALES FEMALES
SIKHS
HINDUS
MUSLIMS

M22CC

These adjustments were not made in any of the provincial returns and have not been made in the age returns as shown in Table VII in Part II of this Report. They have, however, been worked out for All Religions for all India and the results will be found in Subsidiary Table I to this chapter. The other subsidiary tables in which all India figures of age by religion are involved have also been based on the unadjusted quinary groups, and the same procedure has been followed in the case of the tables in which civil condition is involved. In any case the adjustment to be made for the continuous decrement in successive age periods is so small that for all practical purposes it can be ignored, and in point of fact Mr. Vaidyanathan who examines the 1931 age returns in the annexure to this chapter prefers a different adjustment to that of Mr. Meikle.

Periodic Variation.

72. Clearly the smoother quinquennial age groups of 1931 are not strictly comparable to those of previous censuses which are unevenly weighted by preferential digits. This bias however does not affect the decennial group in which all the series of digits appear, and the comparison with previous censuses has therefore been made by decennial periods. The table below shows the age distribution of 10,000 males and females of the Indian population by 10-yearly age groups for the 5 decades 1891—1931 adjusted for mortality like Subsidiary Table I.

Age group.	1931.		1921.		1911.		1901.		1891.	
	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.
0—10 ..	2,802	2,889	2,673	2,810	2,710	2,816	2,648	2,721	2,837	2,923
10—20 ..	2,086	2,062	2,087	1,896	2,013	1,823	2,130	1,917	1,974	1,758
20—30 ..	1,768	1,856	1,640	1,766	1,718	1,839	1,666	1,787	1,678	1,801
30—40 ..	1,431	1,351	1,461	1,398	1,451	1,391	1,457	1,408	1,455	1,401
40—50 ..	968	891	1,013	967	1,014	969	1,019	991	1,004	949
50—60 ..	561	545	619	606	609	607	614	621	590	596
60—70 ..	269	281	347	377	340	380	466	555	462	573
70 and over	115	125	160	180	145	175				
Mean age ..	23·2	22·8	24·8	24·7	24·7	24·7	24·7	25·1	24·4	24·9

The decennium 1881-91, which was like that of 1921-31 free from any marked catastrophes, showed what may be taken as a normal increase of 9·6%. This percentage has been exceeded by the increase during the past decade, but only by 1·0%. The intervening three decades were much below normal by these standards, but it is possible that in India a decade free from any disturbing catastrophe in the way of famine, pestilence or epidemic is rather the exception than the rule. The accompanying diagrams compare the age groups by sex in 1931 and 1921 and also the quinquennial age groups in Northern Ireland in 1926. The following changes in the age constitution of India are to be noticed : (*i*) The increase in children under five years old ; this reduces the mean age, though the consequent reduction does not indicate any curtailment of longevity. This increase is directly attributable to the prosperity of the decade since 1921 : (*ii*) the low numbers in group 5-10 ; this presumably results from the after effects of the influenza epidemic at the end of the last decade, though in point of fact the first half of the decade under review was more prosperous than the last half : (*iii*) the increase in females in age groups 10-30 ; this should theoretically lead to an increased number of births in the next decade, just as the decrease in the 5-10 years group should involve a corresponding reduction of births in the decade after that : (*iv*) the decrease in the oldest group, where those aged 70 and over have decreased by nearly a million ; this is probably again traceable to the after effects of the influenza epidemic, which is to be very clearly traced

Age.	*1921.*	1931.
0-5 ..	*39,656,410*	53,465,289
5-10 ..	*46,747,388*	45,506,909

Age.	Females.	
	1921.	1931.
10-15 ..	*16,570,526*	19,061,522
15-20 ..	*12,496,066*	15,897,514
20-25 ..	*13,502,280*	16,695,096
25-30 ..	*13,573,002*	14,724,565

also in the following table in the figures of those aged 40 to 60 in 1921:—

Age groups 1901 to 1931 (1891 = 100,000).

1901.		1911.		1921.		1931.	
Age group.	Population.	Age group.	Population.	Age group.	Population.	Age group.	Population.
				0-10 ..	100,000	10-20 ..	84,000
		0-10 ..	100,000	10-20 ..	72,800	20-30 ..	73,200
0-10 ..	100,000	10-20 ..	76,300	20-30 ..	68,200	30-40 ..	61,800
10-20 ..	72,000	20-30 ..	67,300	30-40 ..	54,650	40-50 ..	39,550
20-30 ..	94,500	30-40 ..	83,000	40-50 ..	58,300	50-60 ..	36,350
30-40 ..	84,400	40-50 ..	62,250	50-60 ..	38,750	60 and over	28,600
40-50 ..	72,000	50-60 ..	46,400	60 and over	40,900		
50-60 ..	64,700	60 and over	58,000				
60 and over	88,050						

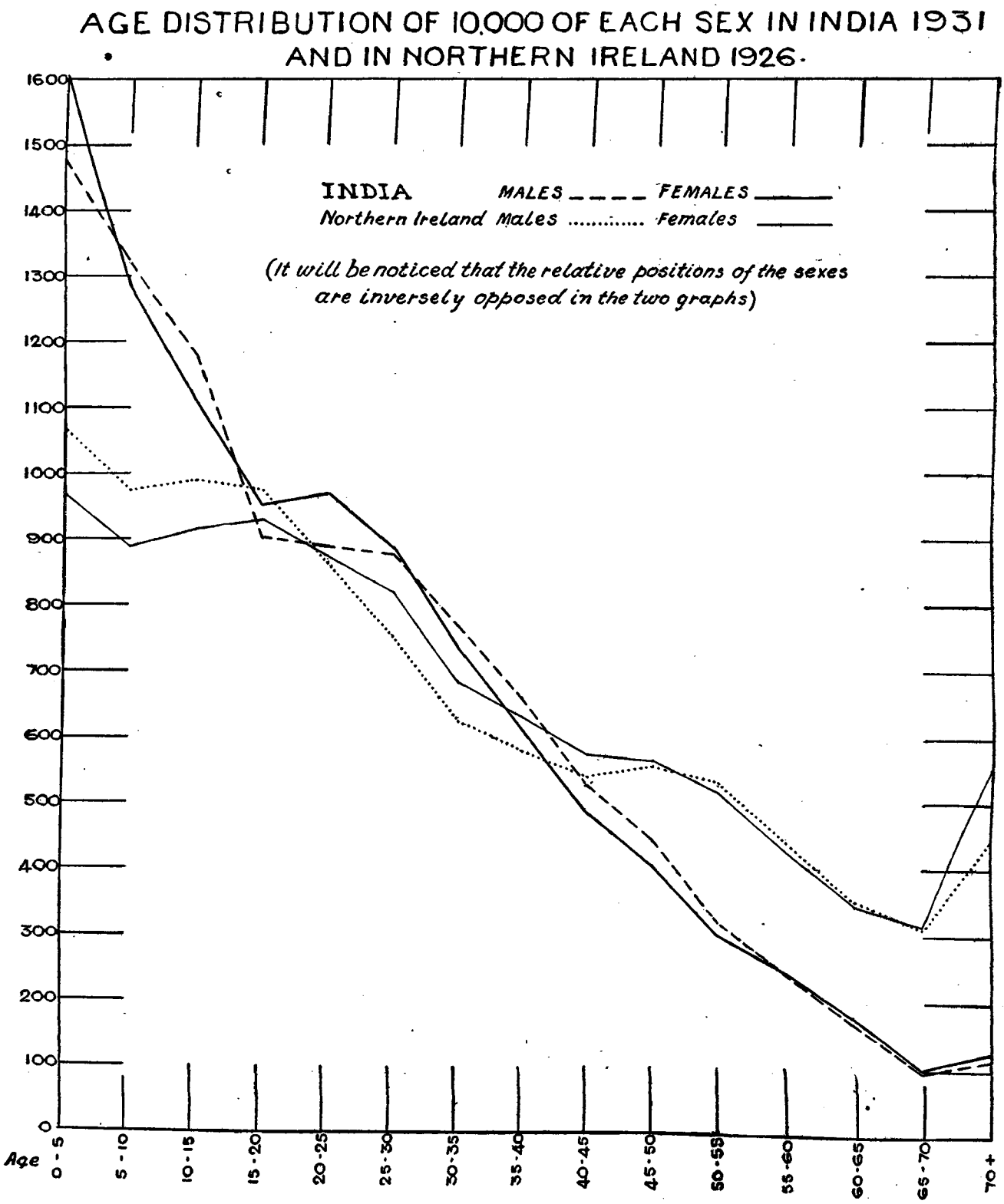
The table above is designed to illustrate the decrement from census to census of any particular ten years age group. Thus group 0–10 in 1891 becomes group 10–20 in 1901, 20–30 in 1911, 30–40 in 1921 and 40–50 in 1931. The table is therefore composed to illustrate the decennial decrease in an unit of 100,000 persons starting whenever possible from 1891. The 1931 figure for age group 0–10, based on the 1921 figure for 0–10=100,000, would be 114,000, indicating the great increase in the number of children found at this census. The age groups 10-20 of 1921 and 20-30 of 1931 represent of course an impossibility as the apparent increase, where there should be a decrease on account of mortality, cannot be accounted for except by misstatements of age in 1921 or in 1931.

Age distribution.

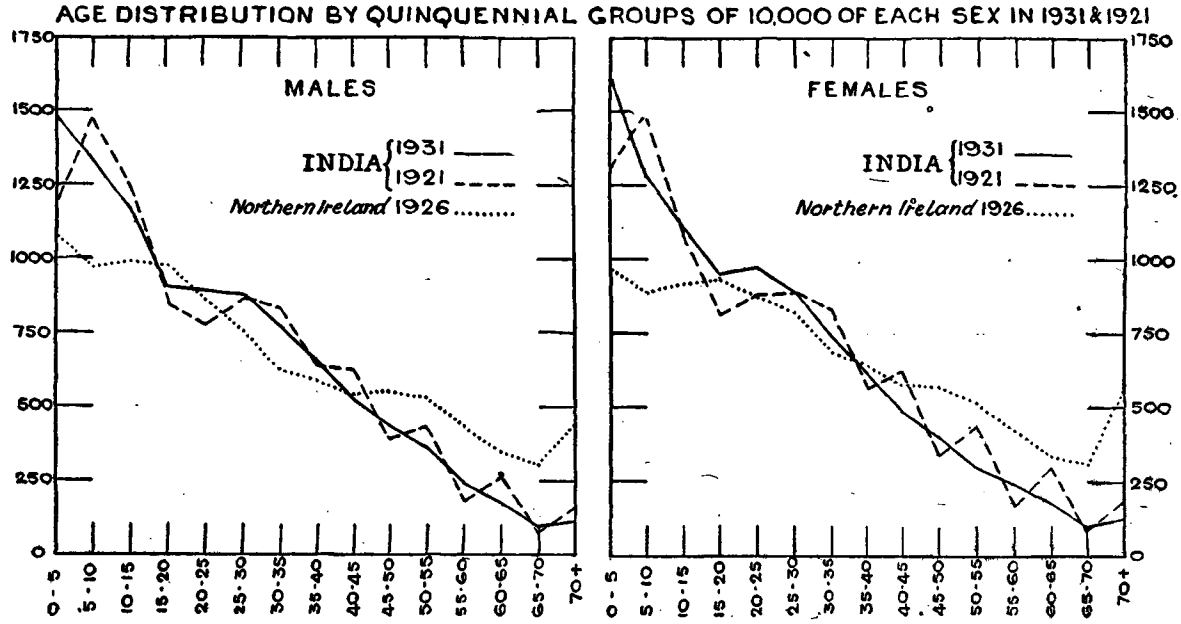
73. According to Sundbärg a normal population has about one half of its total between the ages of 15 and 50, and the proportion of those above that age group to those below it indicates whether the population is increasing, stationary or decreasing. The youngest of the three population groups must be double the eldest if the population is to continue to grow. Just short of that point it may be stationary, but if the elder continue to exceed the younger the population must be regressive. In the marginal tables, the populations of the different provinces and of different religions are shown arranged in order of progressiveness as determined from the 1931 census returns and it will be seen that all of them are clearly progressive according to Sundbärg's classification, except that of the Parsis which must be regarded as stationary, though it is possible, as pointed out below that Sundbärg's categories need readjustment before they can be satisfactorily applied to Indian conditions. The proportions of children to adults are also shown in subsidiary table IV at the end of this chapter with the figures of several censuses compared. In 1921 the Census Commissioner pointed out that the apparent rise in the ratio of children to adults was not an indication of increased fertility during the decade 1911-21, but was due to a depletion of the adult categories by the influenza epidemic. In the 1931 figures the effects of this depletion are still to be seen in the fall of the older age categories with regard to the reproductive ages. On the other hand the proportion of children has still further increased and this time it is clearly due to increased propagation during the years of prosperity. If the total population aged 15 to 50 be taken as

Province or State.	Percentage of population aged 0—15 years.	15—50 years.	50 years and over.
Ajmer-Merwara ..	38·8	52·0	9·2
Andaman and Nicobar Islands.	28·7	63·6	7·7
Assam	42·2	49·8	8·0
Baluchistan	24·9	70·9	4·2
Bengal	40·8	51·1	8·1
Bihar and Orissa ..	40·2	50·2	9·6
Bombay (*excluding Aden*)	39·7	51·2	9·1
Aden	26·2	66·3	7·5
Burma	37·4	51·3	11·3
Central Provinces and Berar.	40·1	50·0	9·9
Coorg	35·0	57·2	7·8
Delhi	36·3	55·9	7·8
Madras	38·9	50·5	10·6
N. W. F. Province ..	41·0	50·4	8·6
Punjab	41·2	48·1	10·7
United Provinces ..	38·9	51·3	9·8
Baroda State ..	39·1	50·4	10·5
Central India Agency ..	40·1	51·5	8·4
Gwalior State ..	39·4	52·0	8·6
Hyderabad State ..	39·9	50·0	10·1
Jammu and Kashmir State.	40·6	50·3	9·1
Cochin State	41·7	48·2	10·1
Travancore State ..	42·6	47·7	9·7
Mysore State	40·1	49·9	10·0
Punjab States Agency ..	39·9	49·3	10·8
Rajputana Agency ..	40·7	49·5	9·8
Sikkim State	40·9	47·6	11·5
Western India States Agency.	42·0	47·9	10·1
India ..	**39·9**	**50·5**	**9·6**

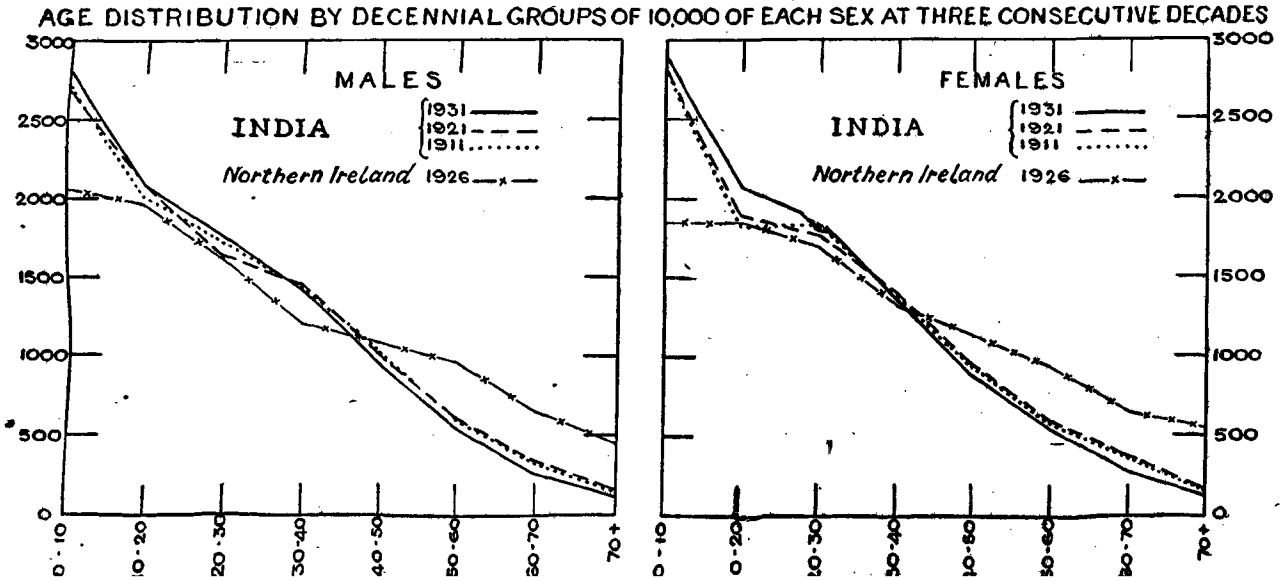
Community.	Percentage of population aged 0—15 years.	15—50 years.	50 and over.
Tribal	43·9	47·8	8·3
Muslim	42·2	49·3	8·5
Christian ..	41·7	49·2	9·1
Jew	37·7	53·6	8·7
Hindu	39·2	50·9	9·9
Sikh	39·5	48·2	12·3
Jain	36·7	51·7	11·6
Parsi	27·2	56·7	16·1

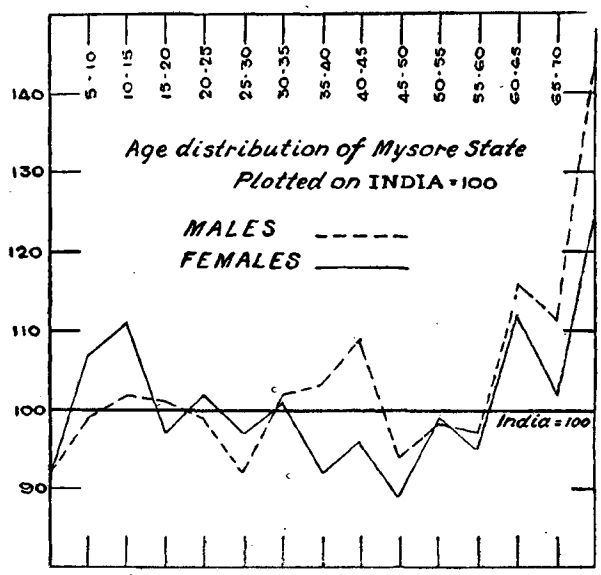

AGE DISTRIBUTION OF 10,000 OF EACH SEX IN INDIA 1931
AND IN NORTHERN IRELAND 1926.
INDIA MALES FEMALES
Northern Ireland Males Females
(It will be noticed that the relative positions of the sexes are inversely opposed in the two graphs)
1600
1500
1400
1300
1200
1100
1000
900
800
700
600
500
400
300
200
100
0
Age
0 - 5
5 - 10
10 - 15
15 - 20
20 - 25
25 - 30
30 - 35
35 - 40
40 - 45
45 - 50
50 - 55
55 - 60
60 - 65
65 - 70
70 +

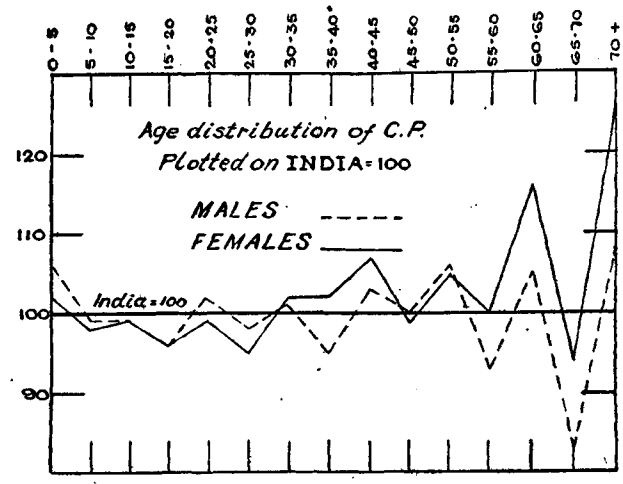
AGE DISTRIBUTION BY QUINQUENNIAL GROUPS OF 10,000 OF EACH SEX IN 1931 & 1921

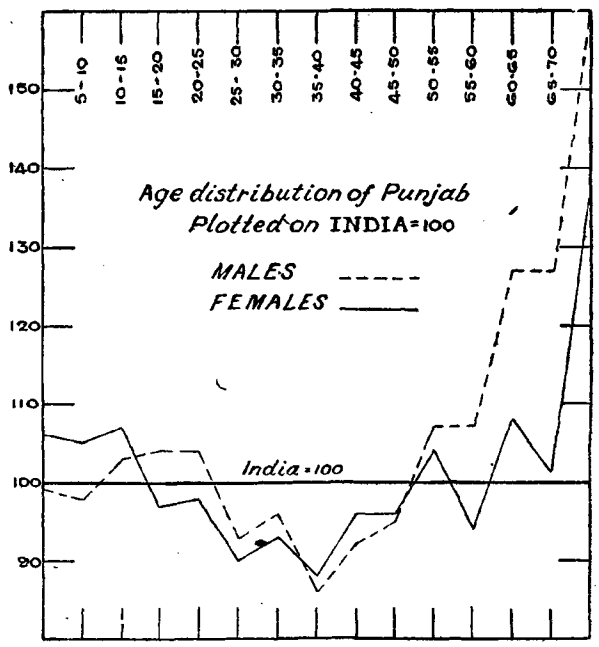


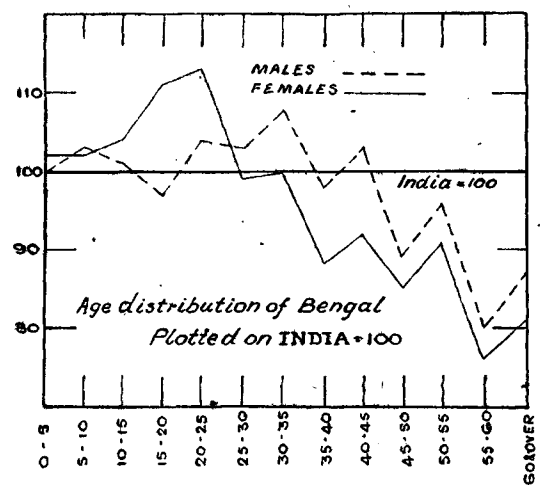
AGE DISTRIBUTION BY DECENNIAL GROUPS OF 10,000 OF EACH SEX AT THREE CONSECUTIVE DECADES

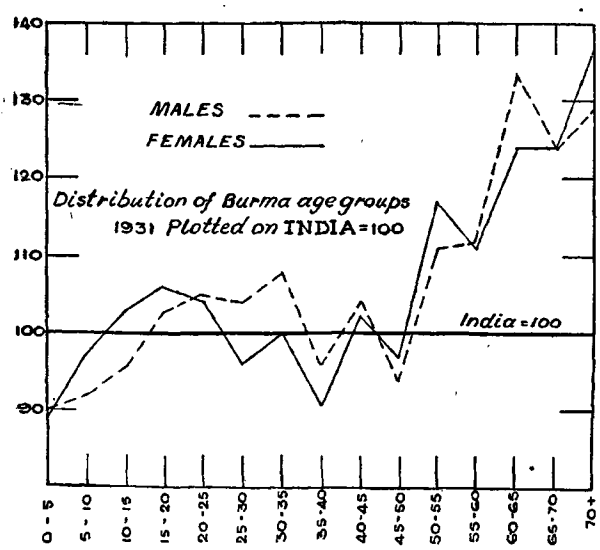


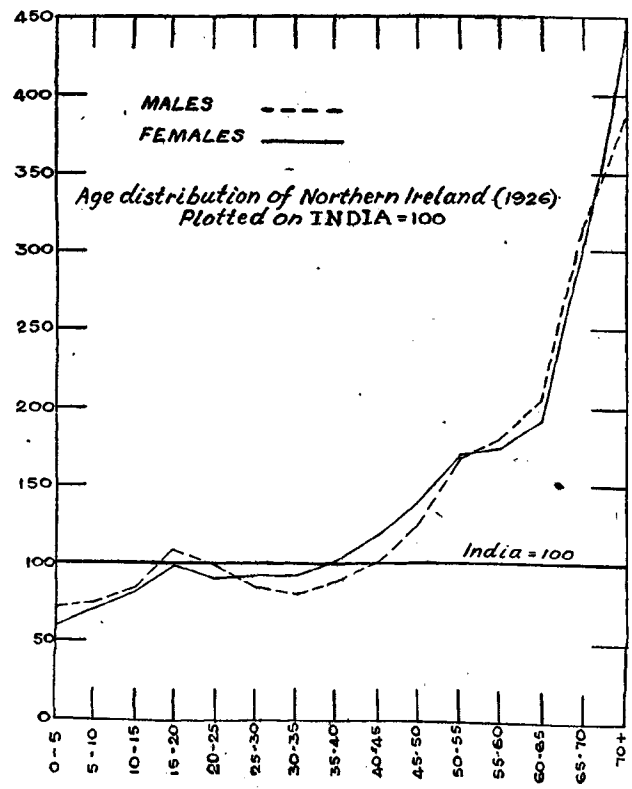

Age distribution of Mysore State
Plotted on INDIA = 100
MALES
FEMALES
India = 100


Age distribution of C.P.
Plotted on INDIA = 100
MALES
FEMALES
India = 100


Age distribution of Punjab
Plotted on INDIA = 100
MALES
FEMALES
India = 100


MALES
FEMALES
India = 100
Age distribution of Bengal
Plotted on INDIA = 100


MALES
FEMALES
Distribution of Burma age groups
1931 Plotted on INDIA = 100
India = 100


MALES
FEMALES
Age distribution of Northern Ireland (1926)
Plotted on INDIA = 100
India = 100

100, those aged 50 and over were 23 in 1921 and have fallen to 19 in 1931, whereas those aged 0 to 15 have risen from 78·8 to 79·1. In 1891 after a similar decade of prosperity and increase the corresponding figures were likewise 79 for those aged 0 to 15, and 22 for those aged 50 and over, whereas after the following decade, which had suffered much from famine, the corresponding figure for those over 50 was still 22 but for those from 0—15 only 76. The diagrams accompanying this chapter show the distribution of 10,000 of each sex by age groups giving for comparative purposes the corresponding distribution by age groups in Northern Ireland. As an indication of comparative fertility the proportion borne by children 0—10 to married females of 15—40 may be examined and the marginal table gives figures for some communities. Similarly the proportion of persons aged sixty and over to those aged 15 to 40 is an indication of comparative longevity. Comparison suggests that fertility and longevity, though not quite in inverse ratio, approach such a position. In the case of Anglo-Indians the only age groups available necessitate the use of slightly different ages. The results in their case may be compared with the others as approximately equivalent. In the case of castes quinquennial age groups are not available and 0—6 is used for 0—10, 17—43 for 15—40. It may be observed that the castes which head the list in the marginal table all practise adult marriage. The low point at which the mean age falls rather suggests that for India the three age-groups of Sundbärg might need modification, and that 15 and 50 years are a little too old at which to start the second and third age groups respectively. This was in fact pointed out by Sir Edward Gait in 1911, and he took as his standard for comparison the numbers aged 0—10, 15—40 and 60 and over, thus omitting the population from 10 to 15 and from 40 to 60. It would perhaps be more satisfactory to take the total population into account dividing it into 0—13½, 13½ to 45 and 45 and over, a method which would give in 1931 the following result:—

Community.		No. aged 0—10.	No. of married women aged 15—40.	No. of children aged 0—10 to each married woman aged 15—40.
Tribal	..	2,443,237	1,247,270	1·96
Christian	..	1,760,983	908,570	1·94
Sikh ..	..	1,194,247	621,095	1·92
Muslim	..	22,972,076	12,870,165	1·78
Jain ..	..	319,953	195,063	1·64
Hindu	..	66,177,624	40,378,332	1·64
Parsi ..	..	19,404	12,142	1·60

Community.	Sex.	No. aged 60 and over.	No. aged 15—40.	Percentage of those aged 60 and over on those aged 15—40.
1	2	3	4	5
Tribal ..	M.	123,846	1,455,660	8·5
	F.	*139,208*	*1,529,419*	*9·1*
Muslim ..	M.	1,547,638	16,179,065	9·6
	F.	*1,277,130*	*15,011,484*	*8·5*
Hindu ..	M.	4,782,296	50,089,524	9·5
	F.	*5,044,122*	*48,354,902*	*10·4*
Jain ..	M.	28,276	266,275	10·6
	F.	*30,340*	*246,619*	*12·3*
Sikh ...	M.	147,828	963,229	15·3
	F.	*106,023*	*719,448*	*14·7*
Parsi ..	M.	3,957	24,150	16·4
	F.	*3,730*	*23,348*	*16·0*

Anglo-Indians.

	No. aged 60 and over.	No. aged 17—39.	Percentage of persons aged 60 and over on persons aged 19 to 39.
M.	3,164	27,419	11·5
F.	*3,553*	*25,023*	*13·7*

Caste or Tribe.		No. of children aged 0—6.	No. of married women aged 17—43.	No. of children 0—6 to each married woman 17—43.
Karen	..	160,577	107,455	1·49
Bhil ..	..	169,254	117,247	1·44
Nayar	..	310,456	230,371	1·35
Brahui	..	924	695	1·33
Santal	..	530,232	400,942	1·32
Baidhya	..	21,645	16,543	1·31
Gujar..	..	410,035	322,711	1·27
Momin	..	499,214	394,353	1·27
Bhangi	..	142,360	117,010	1·22
Chamar	..	2,446,885	2,054,425	1·19
Kayastha	..	437,847	375,279	1·17
Teli ..	..	1,341,910	1,153,892	1·16
Kahar	..	402,294	346,204	1·16
Rajput	..	1,661,211	1,453,941	1·14
Dhobi	..	296,094	262,154	1·13
Brahman	..	2,320,692	2,095,937	1·11
Kunbi	..	1,065,981	977,863	1·09

0—13½, 128,465,421 persons, 13½ to 43½, 167,523,422, and 43½ and over, 53,770,475; stated in percentages the corresponding figures are 37, 48 and 15.

Mean Age.

74. The mean age in England and Wales in 1921 was 30·6 and that in Northern Ireland in 1926 was the same, whereas that of India is only 23·02 and it would seem that the expectation of life at 24 years is under 25 years except in

Madras. This conclusion is arrived at from the actuarial report on the 1901 census, which also indicates that the expectation of life in India 30 years ago was greatest between 4 and 9 years and at no age attained 40 years, though it came nearest to doing so in Madras. In the Public Health Commissioner's Report for 1927 the expectation of life in India at the age of five was quoted as 35 years. Returning to the 1901 actuarial report it appears that Burma was better off in this respect as the expectation of life at from 3 to 6 years of age exceeded 42 years for males and at from 3 to 5 years exceeded 43 for females. The infant mortality rate obtained from the same tables is only 23 per cent. in Burma as against almost 30 per cent. in most of India. The mean ages by sex for the different provinces and states and for religions are :—

	All Religions.		Hindu.		Jain.		Tribal.		Christian.		Muslim.	
Province or State.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females
1	2	3	4	5	6	7	8	9	10	11	12	13
India ..	23·2	22·8	23·5	23·3	24·6	24·5	21·8	21·5	22·5	22·0	22·4	21·5
Ajmer-Merwara ..	23·8	23·5	23·7	23·6	25·8	26·1	22·1	22·9	23·1	21·8	23·9	22·8
Andaman and Nicobar Islands.	27·8	21·6	*	*	*	*	*	*	*	*	*	*
Assam ..	22·7	21·6	23·9	22·2	*	*	23·2	22·5	*	*	22·0	20·1
Baluchistan ..	25·2	20·0	*	*	*	*	*	*	*	*	*	*
Bengal	23·3	21·7	*	*	*	*	22·6	20·9	*	*	*	*
Bihar and Orissa	23·0	23·6	23·4	24·0	*	*	21·4	21·7	21·1	21·3	22·6	23·0
Bombay	23·4	22·8	*	*	24·9	23·7	*	*	*	*	*	*
Burma	24·3	23·6	*	*	*	*	*	*	*	*	*	*
Central Provinces and Berar.	23·7	23·8	24·2	24·3	25·0	25·0	23·1	23·2	22·0	21·7	24·2	23·3
Coorg	25·0	23·2	*	*	*	*	*	*	*	*	*	*
Delhi	24·4	22·2	24·4	22·4	*	*	*	*	25·0	23·2	24·4	21·8
Madras	24·4	24·3	24·5	24·4	27·3	27·3	23·4	23·4	23·9	23·4	23·1	23·0
North-West Frontier Province.	22·6†	21·8†	24·0	21·9	*	*	*	*	*	*	23·2	22·5
Punjab (*including Agency*).	24·3	23·1	24·7	23·4	*	*	*	*	22·9	21·5	23·8	22·7
United Provinces of Agra and Oudh (British Territory).	24·5	24·5	24·1‡	24·3‡	*	*	*	*	*	*	23·8	23·3
Baroda State ..	23·7	23·6	23·7	23·6	25·2	25·8	22·6	20·8	*	*	24·0	23·9
Central India Agency.	23·3	23·2	23·3	23·3	26·1	25·7	21·4	20·9	*	*	24·3	23·4
Gwalior State ..	23·4	23·2	24·4	24·2	26·0	23·7	*	*	26·1	24·7	24·2	23·2
Hyderabad State	23·5	22·6	*	*	*	*	*	*	*	*	23·6	22·9
Jammu and Kashmir State.	23·6	23·1	26·9	25·2	*	*	*	*	*	*	23·5	22·5
Cochin State ..	23·7	24·1	23·9	24·6	24·0	21·5	*	*	23·3	23·3	23·0	22·5
Travancore State ..	23·0	22·8	23·3	23·3	*	*	*	*	22·6	22·2	22·2	21·6
Mysore State ..	25·1	24·4	24·7	23·8	25·5	24·6	22·7	21·7	24·5	23·7	23·9	21·9
Rajputana Agency	23·5	23·4	23·6	23·5	24·8	25·8	20·4	20·3	23·4	21·4	23·5	22·7
Sikkim State ..	23·0	22·8	*	*	*	*	*	*	*	*	*	*
Western India States Agency.	22·6	22·8	*	*	*	*	*	*	*	*	*	*

NOTE.—The figures against the respective Provinces include attached States, except in the case of Madras which excludes Cochin and Travancore.

* Figure unavailable or unimportant.

† Calculated on enumerated population only.

‡ Brahmanic Hindus only.

Expectation of life.

75. According to the 1901 investigation the expectation of life in India is slightly greater at birth for females than for males but thereafter is appreciably less until the age of 20 years, when females may again expect a longer life than males of the same age, and thereafter their expectation of life is slightly better throughout. The inference is that the female infant has greater vitality at birth, but is more likely to succumb first on account of the greater tendency in India to neglect girls in favour of boys and secondly on account of the risks of early marriage. The actuarial examination in 1911 however gave, with less probability perhaps, a better expectation of life for females at all ages up to 80 when the expectations

were equalised, the male expectation going very slightly ahead at 84 years. At the same time the 1911 examination gave a slightly decreased expectation of life for both sexes and all ages as compared with that of 1901, while the 1901 expectations repeated there were not quite so high as those of 1891. No rates at all were worked out from the census returns of 1921, as the actuary considered that their interest would be purely academic, and that the returns were not reasonably dependable. It would therefore be unwise to attach too much importance to the life tables of previous decades. The constant figure for the mean age at this census as compared with previous ones and in conjunction with the consistency of the decennial age groups suggests that the expectation of life has not much altered since 1891, though until the report of the actuary on the 1931 age returns is available it is not possible to say for certain*. Such a report is under preparation at the time of writing and will be found in the annexure which follows this chapter. As regards Indian mortality rates generally, it is to be inferred from two articles published in the *Journal of the Institute of Actuaries* in July 1929 that the mortality rate rises to maximum at about 55, though in other respects following a similar course to that of the United Kingdom. It also appears that of Indians who insure their lives Hindu mortality is slightly higher than that of other groups, Parsis experiencing ·66 of Hindu mortality, European ·75, Anglo-Indian ·79 and Muslims ·92, though this last figure must be accepted with reserve, as owing to their objection to insurance on religious grounds very few Muslims insure their lives at all. The age distribution of the population in 1931 as compared with 1921 will be found presented for India as a whole and for main communities in Subsidiary Tables I and II at the end of this chapter. A recurrent feature of the Indian age returns is the dip in the curve (*v. inf.* para. 81) at the age group of 15—20. This feature, which is much the same in both sexes, is usually ascribed to more or less intentional misstatement of the ages of both sexes in their 'teens'. It is just possible that this dip in the 1931 curve is the result in part of the depletion, by the influenza epidemic of the end of the last decade, of females of the reproductive ages. It is however pointed out by the Census Superintendent for Central India that there is a general tendency to lower the age of boys for whom matrimonial arrangements are being made; allusion to the prevailing misstatement of the age of girls has already been made, while in regard to boys the Superintendent of Census Operations for Madras may again be quoted :—

> "The Indian outlook on age is, as remarked, much more functional and the advent of so pronounced a vital phenomenon as puberty exercises probably a considerable influence on age returns. If it has arrived the tendency will be to attribute definitely mature years; if it has not the tendency may be to diminish the actual tale of years due. Much of this is of course conjectural but the actual age return curves dealt with already do show peculiar aggregations at ages between 10 and 15 and after 20".

The difference in the age groups of those who live in towns may be inferred by referring to paras. 43 and 48 in chapter II above.

Vital Statistics.

76. The vital statistics of India, are well known to be defective. They are compiled from records maintained locally by means which vary in different provinces, but generally they are kept up by the reports of village officials in rural areas and by municipalities in urban. In the latter case their accuracy will naturally depend on the amount of interest taken in the matter by the urban authorities. This is not great, and even the rural returns are probably more accurate on the whole. In them however, the reporting of the occurrence of births and deaths is often a troublesome duty which the village headman or chaukidar is apt to neglect. Obviously in the case of births he is likely to wait and see whether a child will live and so save himself in many cases the necessity of making a second report for its death, while he no doubt hesitates to report deaths which would give any excuse for the unwelcome visits of unduly suspicious police officers. Taken on the whole the defect in vital statistics is probably to be estimated at about 20 per cent., though it is much higher at its maximum. For example in Mysore State the deficiency is put at 50 per cent. or even more. The returns from which birth and mortality rates are deduced, and the figures given in the subsidiary tables to this

* The expectation of life as deduced by the Actuary from the 1931 returns shows an expectation at birth of 26·56 years for females and 26·91 for males; at the ages of 4 and 5 years, respectively, when the expectation is at its best, it is 36·75 for females and 38·96 for males. Attention is drawn to the superior expectation enjoyed by males. The figures are for India as a whole.

chapter and to chapter I, can therefore be only accepted subject to reservation. They are however probably reliable enough as indications of the general trend of birth and death rates, even though the gross figures themselves are understated in both directions, and in Madras Province the returns are accurate enough to have made it possible for the department of Public Health to prognosticate the result of the 1931 Census with an error (on the excess side) of not more than 2 per cent. Bengal and the United Provinces, in that order, are believed to be the next most accurate in respect of their returns, although the Census Superintendent of the latter province estimates the percentage of error in the record of births as 15 per cent. and in that of deaths as 22 per cent. In Assam the Census Superintendent considers that "at least one third of vital occurrences go unreported", and that with reference only to the areas in which vital statistics are theoretically maintained.

Infantile and Puerperal mortality.

77. The question of population and age necessarily involves some reference to the question of infant mortality—that is to the number of infants, per mille born, who die during the first year of life. The infant mortality rate has long been notoriously high in India as compared with most countries in the west of Europe, but is not nearly so high as that, for instance, of Chile, and from 1910-1925 was comparable with that of Hungary, while it was considerably lower than that of the Straits Settlements. The rate of infant mortality in India during the decade under review shows an appreciable reduction on the rate of the previous decade even if allowance be made for the heavy mortality of the influenza years. The marginal table shows the infant mortality rates for the two decades in so far as the figures are available, as 1930 is latest year for which India figures have been obtained by the Public Health Commissioner. The diagram at the end of this chapter, derived from his Report for 1930, gives an indication of the respective conditions of different provinces in the matter of infantile mortality, a curious feature being the high rate consistently prevailing in Coorg, which, as a rural province comparatively free from *purdah*, practising post-puberty marriage and situated at a high altitude, might be presumed to have a low infant death rate; the graphs illustrating the infant mortality of India and of some of the Provinces were also prepared by Colonel Russell and are reproduced here with his permission. It is in towns that the highest infantile mortality is found and the marginal table shows the rates from 1925 to 1929 for Presidency Towns and certain provincial capitals. The causes of infantile mortality as analysed by the Executive Health Officer for Bombay from time to time show that by far the greater number are due to infantile debility and malformation including premature birth, respiratory diseases coming next, then convulsions, and then diarrhœa and enteritis. A special enquiry was made in Bombay in 1930 as to the infant mortality rates among working and non-working mothers, the results of which are conveniently summarized in Mr. Sorley's report on the cities of Bombay:—

British India—Infant mortality rate per 1,000 births.

Year.	Infant mortality rates per 1,000 live births.	Year.	Infant mortality rates per 1,000 live births.
1911 ..	204·98	1921 ..	197·9
1912 ..	207·65	1922 ..	175·09
1913 ..	194·61	1923 ..	175·56
1914 ..	211·83	1924 ..	188·66
1915 ..	201·90	1925 ..	174·40
1916 ..	202·34	1926 ..	189·04
1917 ..	205·18	1927 ..	166·93
1918 ..	266·96	1928 ..	172·94
1919 ..	224·40	1929 ..	178·39
1920 ..	194·93	1930 ..	180·83

City.	Infantile mortality rates per 1,000 live-births during					
	1925.	1926.	1927.	1928.	1929.	1930.
Bombay ..	357	255	316	314	301	298
Calcutta ..	326	372	340	276	259	268
Madras ..	279	282	240	289	259	246
Rangoon ..	352	320	294	341	321	278
Lucknow ..	260	287	256	301	269	329
Lahore ..	222	241	201	204	214	187
Nagpur ..	258	302	254	299	291	270
Delhi ..	183	238	201	210	259	199

"The enquiry covered 2,053 cases. Of these 39·2 per cent. were working mothers and 60·8 per cent. non-working mothers; 91·48 per cent. were Hindus, 3·80 Muslims and 4·72 Indian Christian; and 75 per cent. of the workers were textile workers. The average number of live births per working mother in all areas was 2·85 and per non-working mother was 2·75. In Naigaum a sanitary area, the figures were 2·91 and 2·78 respectively. As regards still births in proportion to live births the figures were, for all areas, working mothers 34 per cent. and for non-working mothers 33 per cent.; and for Naigaum the figures were 31 per cent. and 27 per cent. respectively. It will be obvious that the working class mothers have more children and more still births than non-working mothers, and that the Naigaum figures are better than the general

figures. The statistics are curious. The greater prolificness of working class mothers seems to be due to their better economic condition which leads to their having more and better food than the non-working mothers. But the unfavourable figures for still births amongst working mothers seem to suggest that industrial labour, while not interfering with the conception of children has had effect on child bearing itself. It is by no means unlikely that working mothers work too late before and too soon after child-birth and so are liable to certain influences which do not affect non-working mothers. The table below shows the infant mortality by age groups :—

Age at death.	Rate of infant mortality per 1,000 live-births.		
	Working mothers.	Non-working mothers.	All mothers.
Under 1 day	8	8	8
1 day and under 7 days	26	38	33
7 days and under 1 month	26	23	24
1 month and under 3 months	21	22	21
3 months and under 6 months	22	27	25
6 months to 1 year	99	85	91
Total under 1 year ..	202	203	202

The rate of mortality among infants under six months is greater in the case of non-working mothers than for working mothers, the actual figures being 118 as against 103 ".

In Calcutta the three principal causes of infant mortality are returned as congenital debility, premature birth and *tetanus neonatorum*, syphilis being largely responsible for the second of these. The infantile mortality in Baroda State is said to be chiefly caused by " child marriage, faulty feeding, contamination of the milk supply, ignorant management of children, frequency of motherhood and insanitary conditions ". In Calcutta a high rate of infantile mortality among Muslims is reported to be a constant feature of the vital statistics and this is to be ascribed in the main to the strict purdah observed even among the poorest Muslims living in *bastis*, where all health visitors report that they meet with most opposition to healthy innovations. The above read again with the Bombay figures suggests that immature maternity, purdah and primitive obstetrics are probably still principally responsible for the high rate of mortality among Indian infants and an otherwise somewhat severe critic of the 1911 census report admitted early marriage as a prime cause of the low ratio of females to males and predicted a continued fall of that ratio at the next census and until this cause should be removed. This point of view is supported by what is known of maternity mortality. Obviously the causes of death in child-birth are likely to bear an immediate relation to those of death in the first year of life, and an investigation made in Madras into causes of maternal mortality in 7,324 cases in four cities led to the following conclusions (among others) :—

In 6% of confinements the mother was under the age of 15.

In 3% of confinements instrumental delivery or other surgical interference was required.

The maternal mortality is at its maximum in the earliest ages, being highest in the first confinement, and the earlier the age of the mother the greater the risk of her death.

More than 60% of puerperal deaths were due to sepsis or septicaemia.

Economic conditions had no bearing on maternal mortality ; they seemed almost to have an inverse relationship to neo-natal mortality.

The incidence of neo-natal mortality was greatest in the case of first births, and when the mother was under 20 years of age.

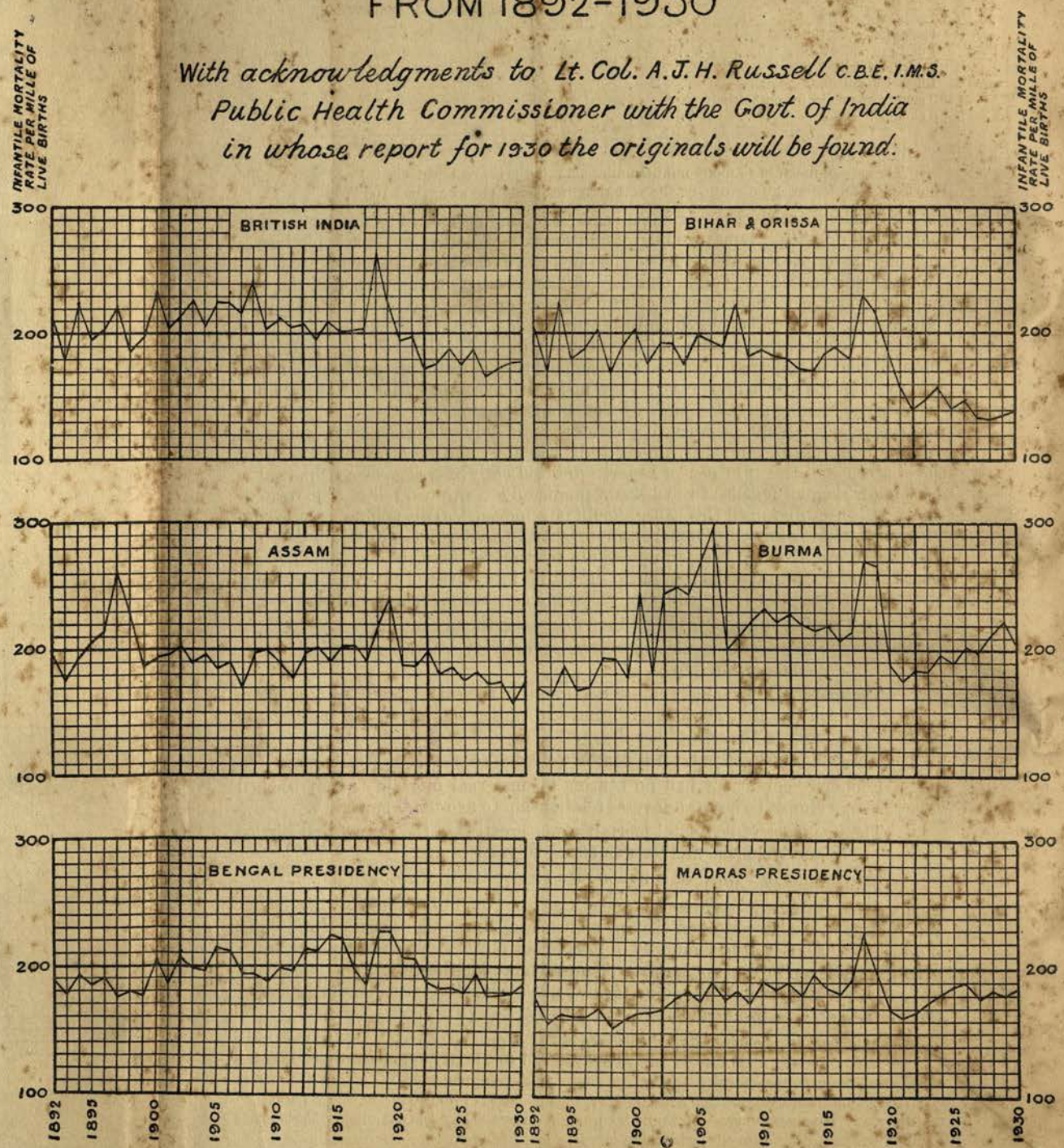
Only about one third of confinements received skilled medical aid.

In a written statement made to the Age of Consent Committee the Assistant Director of Public Health observed that proportionate to the high maternal and child mortality " there is a vast number of invalids or physical wrecks among the survivals ", and even in Travancore State, more advanced in this respect, perhaps, than any part of India except the adjoining state of Cochin, the Census Commissioner of the State is able to pronounce that—

" The highest female mortality, which exceeds that of males by 60 to 61 per 1,000 occurs in the age-period 15—30, and must certainly be attributed to the early marriage of girls and the consequent premature maternity. Death of young mothers at child-birth is not an uncommon occurrence, but more common than this, however, is the death of women in the later period of maturity, say, between the years of 20 and 30, brought on by the physical exhaustion, the nervous break-down and other ailments, which are the aftermath of premature child-bearing."

INFANTILE MORTALITY PER MILLE OF LIVE BIRTHS IN BRITISH INDIA AND PROVINCES FROM 1892-1930

With acknowledgments to Lt. Col. A.J.H. Russell C.B.E. I.M.S. Public Health Commissioner with the Govt. of India in whose report for 1930 the originals will be found.



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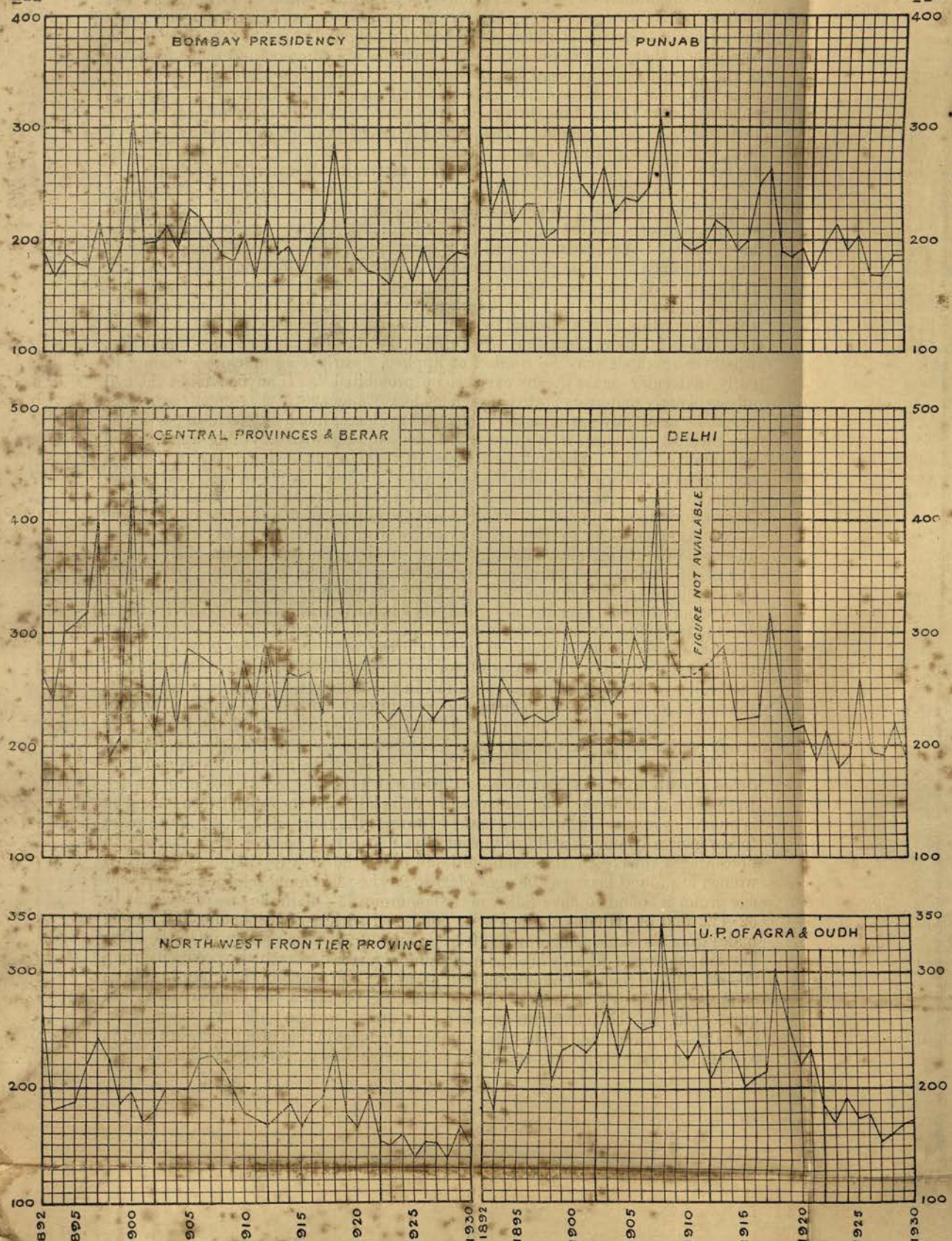
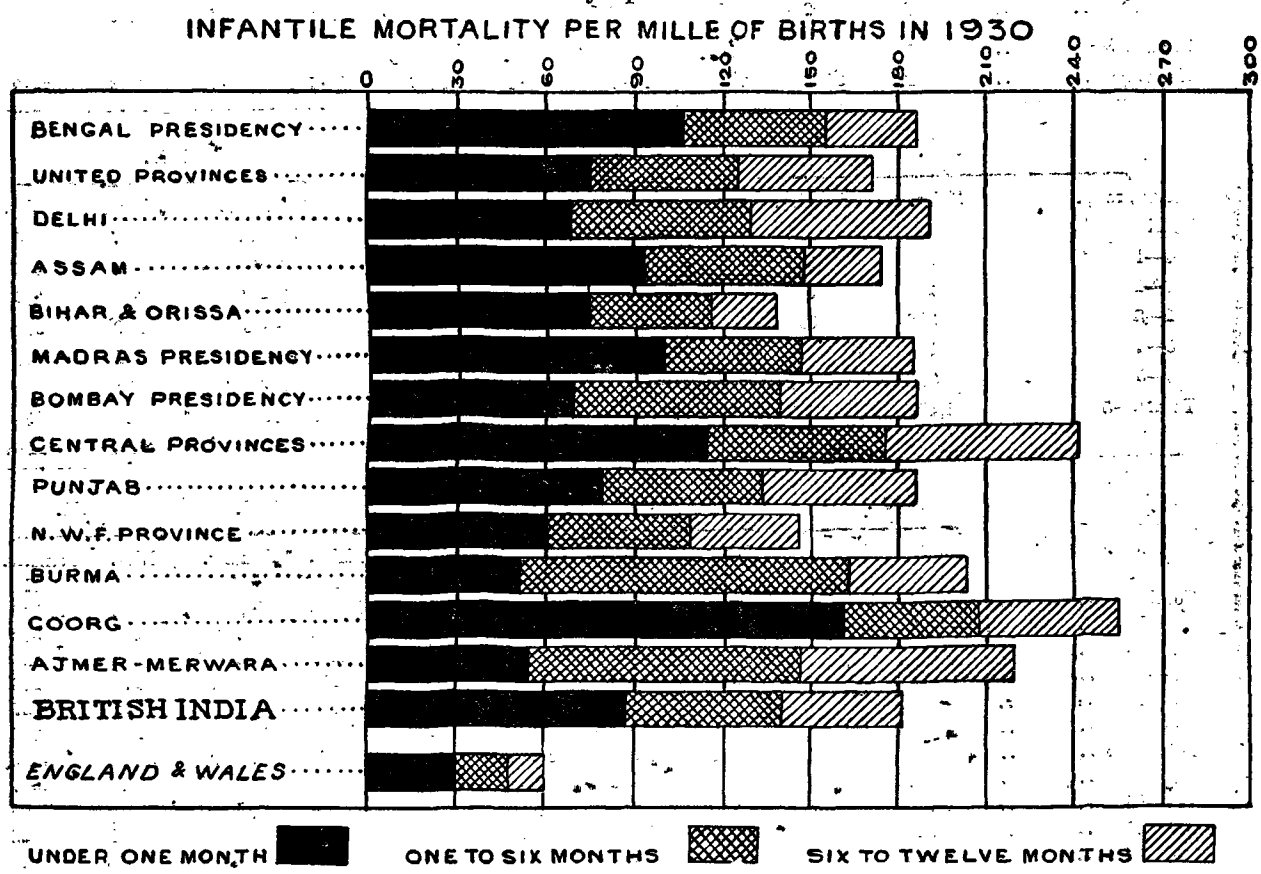
INFANTILE MORTALITY PER MILLE OF LIVE BIRTHS
IN BRITISH INDIA AND PROVINCES
FROM 1892 - 1930

(Continued)



The Age of Consent Committee pointed out that the law as to the age of consent was "practically unknown throughout the country. A knowledge of it was confined to judges, lawyers and a few educated men" (Report p. 18, §. 38). The committee also pointed out that early marriage is normally followed by early consummation and in consequence by early maternity. "Consummation soon after puberty", they say (*Report* pp. 97, 98 § 226, 228) "is almost universal among classes which practise early marriage..... Smriti texts are invoked to prove the need of consummation soon after puberty—preferably within 16 days of the first menses". Again (page 67, § 159) "it is admitted on all hands that the practice of early marriage is widely prevalent throughout Bengal.....It is also established that .... pre-puberty consummations are common and that violations of the Law of Consent occur in many cases". One witness states (*Evidence*, IV, page 510) that "cases are not uncommon in which girls bring forth six or seven children before they attain their eighteenth year". Yet the consequences of early maternity are clear enough. The Age of Consent Committee compares the evil with that of *sati* in the following terms (page 102 § 232) :—"*Satis* were few and far between.....In the case of early maternity the evil is widespread..... .....so extensive as to affect the whole framework of society. After going through the ordeal, if a woman survives to the age of 30 she is in many cases an old woman, almost a shadow of her former self.....In the case of *sati* the utter hideousness of the incident shocked the conscience; in this case the familiarity of the evil blinds us to its ghastly results". The committee concludes (page 152, §§ 339 and 341) that there is "a large element of truth in the theory that frequency of birth has a very direct bearing on maternal and infantile mortality"; that "according to the medical evidence the effect of frequency of births at short intervals is far more disastrous when maternity starts at an early age", and that whatever methods may be needed or applied, "early consummation leading to early maternity ought in any event to be prohibited". If anyone doubt the evil effects of early maternity stated in such moderate language by the committee in their report he need only examine the volumes of evidence, much of which, in particular the medical evidence, it is quite impossible to read with anything approaching equanimity. And the evils of early maternity are complicated and amplified by the conditions under which child-birth takes place. These have been described among others by Dr. H. Suhrawardy, M.D., F.R.C.S.I., in his treatise on "Child Welfare". They are well known and it is not proposed to transcribe their description here, but it does seem necessary to refer to the evidence given before the Age of Consent Committee as indicating that infant mortality is higher among Hindus than among the other communities on account of early marriage and premature births (*Evidence*, volume I, page 439), and that in a very large number of cases the first born child dies, some witnesses even declaring that they had never known one to survive (*ibid*, I, 414, II, 490). It is worth notice in this connection that an investigation at Johnstown, Pa., U. S. A. showed that still births for mothers under 20 years of age numbered 11·1% as compared to 4% for mothers aged 20—24. The results of early maternity with the consequent rapid fall in the numbers of married women after the age of 25 is to be seen in the age curves of both Hindus and Muslims, though possibly in the latter case an important factor in the decrease may be the greater strictness of purdah, particularly among the poorer class. In both these communities the curve of female marriage reaches its peak in the group 20 to 25 and then drops sharply to the age group 35—40, after which the steepness is less pronounced. In the case of males the peak is reached 10 years later and the fall between 35 and 40 is much less marked, while in the case of Burmese the marriage curves of both sexes follow generally similar and less violent lines. This may be expressed otherwise in percentages thus :—Of the communities in which the greatest number of married women are found between the ages of 20 to 25 the total number of females in that age group is found to have fallen in the age group 35—40 in the case of Muslims to 52·4%, and of Hindus to 63·5% as compared with a corresponding fall among males from the same age group to 70·8% and 72·7% respectively. On the other hand in the case of Sikhs, while the maximum of married women also occurs in group 20—25, 59% of the total number in that group are still found in the group 35—40 as compared to 58·6% of males. If the Burmese be taken the comparison is not quite even, as the maximum number of married women falls five years later, in the 25—30 group, and of the total number of females in that group there are 60·7% to be found in the group 40—45, while the corresponding percentage of males is 63·7.

The total numbers in any age group may of course be determined by factors such as disease or migration, but as between different sexes and different communities the comparisons between successive age-groups have some validity. In 1927 the maternal mortality rate for Madras, as disclosed by a special enquiry set on foot by Colonel A. J. H. Russell, was approximately 20 per 1,000 live births, though the figure in the Public Health Commissioner's Report shows only 5·3, and this rate of 20 per mille may be contrasted with the rate of 2·6 in the Netherlands or 6·5 per mille in the U. S. A. The question of infantile and maternity mortality and of the measures taken to reduce them will be found dealt with in the Annual Reports of the Public Health Commissioner with the Government of India for 1927, 1928, 1929 and in particular for 1930, and it is clear not only that there are a number of voluntary societies at work on the question of infantile mortality—such societies as the Seva Sadan Society of Poona or the Indian Red Cross Society in its Health Welfare activities, or the Bombay Presidency Infant Welfare Society, to name three only of many, but that the rate of infantile mortality has been effectively reduced since the census of 1921 in spite of a greatly increased population. At the same time the warning of the Age of Consent Committee as to the inadequacy of such institutions quoted in a later chapter applies also in this connection. Sir John Megaw estimates that "100 out of every 1,000 girl wives are doomed to die in child-birth before they have ceased to have babies, and about 200,000 mothers die in giving birth to children every year in India". What is really wanted is fewer babies but better ones, and it is possible that efforts should be concentrated less on infant welfare directly than on the reduction of immature maternity, on a general improvement in the standard of living and culture, and on the removal of the causes generally rather than on the treatment of the symptoms*.



*It may be added that nothing in the vital statistics or the infant mortality rates as ascertained by the Public Health Department can be found to support the statement, which seems, if correctly reported by the *Daily Herald* and the *Times of India*, to be a grave and quite unjustifiable exaggeration, made at Geneva in 1930 by Mrs. Tarini Sinha that 446 infants of every 1,000 born in India died from the effects of opium given them by their mothers. If the most ample allowance be made for incomplete returns the gross infantile mortality rate for India can hardly be computed at much more than half the figure propounded by Mrs. Sinha for deaths from the effects of opium alone, a cause which does not even figure specifically in the Bombay Health Officer's list.

SUBSIDIARY TABLE I.

Age distribution of 10,000 of each sex in India.

India including Burma.

	1931.		1921.		1911.		1901.		1891.	
	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.
	2	3	4	5	6	7	8	9	10	11
Total	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000
0—1	299	322	286	300	320	336	266	276	326	347
1—2	275	305	138	150	161	176	163	175	173	188
2—3	298	334	230	257	271	298	274	297	287	319
3—4	305	330	271	311	294	329	276	303	318	354
4—5	301	314	277	298	281	294	275	288	305	319
Total 0—5	*1,478*	*1,605*	*1,202*	*1,316*	*1,327*	*1,433*	*1,254*	*1,339*	*1,409*	*1,527*
5—10	1,324	1,284	1,471	1,494	1,383	1,383	1,394	1,382	1,428	1,396
10—15	1,182	1,110	1,245	1,081	1,165	997	1,264	1,082	1,139	946
15—20	904	952	842	815	848	826	866	835	835	811
20—25	891	969	775	881	822	930	787	892	802	897
25—30	877	887	865	885	896	909	879	895	876	904
30—35	770	738	825	833	829	835	848	851	842	846
35—40	661	613	636	565	622	556	609	557	613	555
40—45	527	486	621	621	634	631	649	652	638	626
45—50	441	405	392	346	380	338	370	339	366	323
50—55	318	300	434	438	432	443	437	452	411	426
55—60	243	245	185	168	177	164	177	169	179	170
60—65	171	179	266	298	257	305				
65—70	98	102	81	79	83	75	466	555	462	573
70 and over ..	115	125	160	180	145	175				
Mean age	23·2	22·8	24·8	24·7	24·7	24·7	24·7	25·1	24·4	24·9

India Proper.

Age group.	1931. Males.	1931. Females.	Age group.	1931. Males.	1931. Females.	Age group.	1931. Males.	1931. Females.
Total	10,000	10,000	5—10	1,325	1,282	40—45	547	505
0—1	299	321	10—15	1,200	1,124	45—50	424	389
1—2	273	303	15—20	888	935	50—55	334	314
2—3	296	334	20—25	904	984	55—60	229	230
3—4	305	330	25—30	856	869	60—65	182	191
4—5	300	313	30—35	787	756	65—70	87	90
Total 0—5	1,473	1,601	35—40	640	596	70 and over	124	134
						Mean age	22·3	22·8

Burma.

	1931.		1921.		1911.		1901.		1891.	
Age.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.
1	2	3	4	5	6	7	8	9	10	11
Total	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000
0—1	257	283	234	256	218	241	228	252	280	310
1—2	267	293	210	228	217	236	248	266	210	226
2—3	271	293	232	256	266	289	293	315	270	286
3—4	269	287	270	289	302	323	309	326	312	327
4—5	260	278	248	269	269	291	272	287	253	268
Total 0—5	*1,324*	*1,434*	*1,194*	*1,298*	*1,272*	*1,380*	*1,350*	*1,446*	*1,325*	*1,417*
5—10	1,214	1,245	1,205	1,273	1,276	1,341	1,232	1,282	1,247	1,293
10—15	1,130	1,138	1,152	1,132	1,163	1,126	1,088	1,042	1,192	1,148
15—20	927	1,004	977	1,071	893	967	874	961	912	1,022
20—25	938	1,004	910	948	857	884	888	929	913	910
25—30	910	852	866	819	860	810	909	857	881	806
30—35	835	737	813	710	846	737	877	766	799	684
35—40	637	556	639	538	677	578	648	547	635	539
40—45	550	498	603	561	594	557	567	523	553	514
45—50	413	391	435	393	399	365	396	361	389	358
50—55	353	351	410	413	370	384	381	393	366	393
55—60	271	271	234	239	223	231	231	236	222	232
60—65	228	222	262	259	263	272				
65—70	122	126	122	119	124	122	559	657	566	684
70 and over ..	148	171	178	227	183	246				
Mean age	24·30	23·6	25·70	25·14	25·32	24·98	25·28	25·06	25·00	24·91

SUBSIDIARY TABLE II.

Age distribution of 10,000 of each sex in each main Religion.

Age and Religion.	1931.		1921.		1911.		1901.		1891.		1881.	
	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.
Hindu	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000
0—5	1,441	1,556	1,165	1,270	1,293	1,388	1,206	1,286	1,367	1,484	1,277	1,375
5—10	1,299	1,252	1,442	1,461	1,336	1,332	1,361	1,346	1,400	1,372	1,400	1,354
10—15	1,189	1,103	1,237	1,073	1,151	984	1,268	1,082	1,134	938	1,220	1,011
15—20	889	917	835	779	851	805	871	814	831	782	821	769
20—40	3,211	3,237	3,139	3,200	3,216	3,276	3,157	3,229	3,169	3,234	3,216	3,282
40—60	1,580	1,502	1,679	1,637	1,673	1,642	1,682	1,676	1,635	1,596	1,601	1,612
60 and over	391	433	503	580	480	573	455	567	464	594	465	597
Mean Age ..	23·5	23·3	25·1	25·2	24·9	25·2	24·9	25·5	24·6	25·2	24·6	25·4
Muslim	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000
0—5	1,544	1,717	1,282	1,442	1,397	1,550	1,380	1,495	1,545	1,680	1,415	1,524
5—10	1,400	1,364	1,584	1,628	1,526	1,548	1,509	1,510	1,515	1,469	1,528	1,460
10—15	1,233	1,178	1,268	1,077	1,208	1,015	1,261	1,068	1,131	925	1,197	976
15—20	885	991	837	881	833	872	840	869	847	888	777	800
20—40	3,150	3,151	3,029	3,109	3,047	3,123	3,010	3,097	3,040	3,136	3,023	3,132
40—60	1,402	1,247	1,493	1,378	1,493	1,395	1,506	1,439	1,471	1,396	1,545	1,518
60 and over	386	352	507	485	496	497	494	522	451	506	515	590
Mean Age ..	22·4	21·5	24·1	23·3	23·9	23·3	24·1	24·0	23·7	23·8	24·3	24·6
Christian ..	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000
0—5	1,576	1,657	1,289	1,391	1,356	1,491	1,290	1,449	1,347	1,551	1,266	1,457
5—10	1,333	1,342	1,382	1,463	1,314	1,411	1,384	1,479	1,308	1,421	1,298	1,450
10—15	1,221	1,217	1,261	1,246	1,199	1,178	1,283	1,244	1,122	1,111	1,127	1,138
15—20	942	992	917	928	882	945	865	905	869	922	828	884
20—40	3,107	3,079	3,193	3,114	3,357	3,132	3,299	3,099	3,485	3,147	3,722	3,208
40—60	1,428	1,323	1,501	1,406	1,466	1,398	1,483	1,394	1,468	1,389	1,383	1,394
60 and over	393	390	457	452	426	445	396	430	401	459	376	469
Mean Age ..	22·5	22·0	24·2	23·4	24·0	23·3	24·0	23·4	24·2	23·6	24·2	23·8
Tribal	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000
0—5	1,758	1,840	1,362	1,457	1,640	1,724	1,370	1,449	1,544	1,687	Not available.	
5—10	1,449	1,373	1,696	1,660	1,583	1,521	1,565	1,515	1,718	1,642		
10—15	1,217	1,144	1,280	1,129	1,099	960	1,323	1,151	1,249	1,054		
15—20	808	913	770	799	753	802	872	898	744	763		
20—40	3,034	3,087	2,935	3,117	3,085	3,234	3,080	3,196	2,890	3,068		
40—60	1,407	1,279	1,549	1,385	1,455	1,312	1,453	1,383	1,450	1,313		
60 and over	327	364	408	453	385	447	337	408	405	473		
Mean Age ..	21·8	21·5	23·4	23·2	22·9	22·8	23·2	23·3	22·8	23·0		

SUBSIDIARY TABLE III.

Age distribution of 1,000 of each sex in certain Castes.

Castes.	Males—Number per mille aged—						Females—Number per mille aged—					
	0—6	7—13	14—16	17—23	24—43	44 & over.	0—6	7—13	14—16	17—23	24—43	44 & over.
1	2	3	4	5	6	7	8	9	10	11	12	13
1. Baniya ..	170	158	70	133	291	178	191	160	67	133	276	173
2. Bhangi ..	205	177	75	119	286	138	222	160	69	129	288	132
3. Bhil ..	223	192	71	117	260	137	253	181	78	128	244	116
4. Brahman ..	164	156	69	123	300	188	178	151	64	125	292	190
5. Chamar ..	206	180	73	110	290	141	218	162	66	117	296	141
6. Chetti ..	183	161	65	130	294	167	199	154	67	135	270	175
7. Darzi ..	180	164	72	124	270	190	204	168	77	128	261	162
8. Dom ..	176	160	74	126	312	152	188	151	73	137	305	146
9. Gond ..	205	169	70	105	293	158	203	154	65	122	291	165
10. Gujar ..	188	178	75	112	284	163	217	168	69	119	278	149
11. Iluvan ..	221	182	69	117	264	147	216	172	69	130	264	149
12. Jat	185	173	70	119	276	177	215	171	63	119	268	164
13. Kachhi ..	192	160	76	117	309	146	219	146	72	124	298	141
14. Kahar ..	188	166	75	114	286	171	202	159	69	121	284	165
15. Kallan ..	182	181	63	109	302	163	171	165	52	123	321	168
16. Kayastha ..	168	161	71	130	294	176	188	163	66	134	280	169
17. Khatri ..	177	158	67	130	293	175	206	172	64	120	273	165
18. Kumhar ..	197	174	74	115	279	161	214	163	68	121	275	159
19. Kunbi ..	172	166	81	116	285	180	184	169	70	121	279	177
20. Mahar ..	189	172	85	120	273	161	196	159	82	129	269	165
21. Maratha ..	171	150	92	109	300	178	186	154	102	117	278	163
22. Megh ..	153	162	104	118	280	183	176	160	105	137	264	158
23. Momin (Julaha, etc.)	199	172	70	119	274	166	215	174	70	125	272	144
24. Naibrahman ..	185	171	77	123	284	160	206	162	68	123	284	157
25. Namasudra ..	178	175	66	127	288	166	200	163	72	145	276	144
26. Nayar (Nair)	206	167	67	119	272	169	195	155	63	128	273	186
27. Od	196	181	80	110	275	158	188	184	84	123	271	150
28. Pathan ..	188	175	69	118	286	164	213	164	63	118	288	154
29. Prabhu ..	169	171	80	137	320	123	204	179	92	156	245	124
30. Rajput ..	171	164	71	121	294	179	190	154	61	121	296	178
31. Santal ..	214	191	64	107	291	133	230	169	66	128	276	131
32. Shan ..	180	158	56	116	318	172	184	157	63	142	291	163
33. Tanti ..	192	181	61	100	310	156	189	157	55	116	321	162
34. Teli ..	196	177	68	112	287	160	205	169	61	126	285	154
35. Viswabrahman, etc.	183	167	72	119	285	174	200	166	67	127	276	164
36. Yadava ..	186	175	71	108	298	162	197	163	65	115	296	164

SUBSIDIARY TABLE IV.

Proportion of children under 10 and of persons over 60 to those aged 15—40; also of married females aged 15—40 per 100 females.

Province, State or Agency.	Proportion of children, both sexes per 100.						Proportion of persons over 60 per 100 aged 15—40.						Number of married females aged 15—40 per 100 females of all ages.		
	Persons aged 15—40.			Married females aged 15—40.			1931.		1921.		1911.				
	1931.	1921.	1911.	1931.	1921.	1911.	Males.	Females.	Males.	Females.	Males.	Females.	1931.	1921.	1911.
INDIA ...	**69**	**69**	**68**	**170**	**174**	**167**	**10**	**10**	**13**	**14**	**12**	**14**	**34**	**32**	**34**
Provinces ..	**68**	**68**	**69**	**169**	**172**	**169**	**10**	**10**	**13**	**14**	**12**	**14**	**34**	**33**	**33**
1. Ajmer-Merwara ..	66	62	58	160	164	144	7	9	10	13	8	11	36	34	39
2. Andaman and Nicobar Islands.	42	20	29	176	148	179	4	8	5	11	12	13	38	35	33
3. Assam	74	75	78	189	195	197	8	7	10	9	10	10	34	32	33
4. Baluchistan ..	28	*	*	150	*	*	2	4	*	*	*	*	43	*	*
5. Bengal	68	68	73	169	172	181	8	8	10	10	11	12	36	34	34
6. Bihar and Orissa ..	70	70	73	162	165	168	9	11	12	15	12	16	35	33	33
7. Bombay (including Aden).	66	67	64	165	174	159	8	9	11	13	10	12	36	33	35
8. Burma	62	60	65	205	201	211	12	12	13	15	14	16	26	25	26
9. Central Provinces and Berar.	69	78	73	156	180	160	10	11	15	18	12	15	36	32	36
10. Coorg	49	52	45	159	171	156	6	7	7	10	5	8	33	31	32
11. Delhi	53	54	†	153	150	†	6	7	9	10	†	†	39	38	†
12. Madras	67	65	68	163	160	165	11	11	15	15	15	15	33	32	32
13. North-West Frontier Province (*Districts and Administered Territories*).	72	77	82	195	206	212	10	8	16	15	16	13	33	32	32
14. Punjab	74	77	70	197	199	183	13	12	18	17	15	15	33	32	34
15. United Provinces of Agra and Oudh.	67	66	62	161	161	150	9	10	13	15	12	14	36	34	35
States and Agencies	**71**	**72**	**67**	**174**	**182**	**162**	**10**	**10**	**13**	**14**	**11**	**13**	**34**	**32**	**34**
16. Assam States ..	78	78	88	218	217	232	11	12	15	16	14	15	28	26	27
17. Baluchistan States ..	33	*	*	170	*	*	1	2	*	*	*	*	41	*	*
18. Baroda State ..	68	69	60	157	167	145	10	11	11	13	8	10	36	33	38
19. Bengal States ..	70	72	74	191	197	200	8	6	10	8	11	10	33	32	33
20. Bihar and Orissa States.	76	76	79	178	189	189	6	8	7	10	8	11	34	31	33
21. Bombay States ..	76	80	68	183	195	160	10	10	12	15	10	12	33	31	36
22. Central India Agency	67	71	64	162	176	158	7	8	10	13	8	11	36	33	36
23. Central Provinces States.	81	87	84	181	203	188	8	10	11	14	9	12	35	32	35
24. Gwalior State ..	64	69	‡	164	180	‡	7	9	11	13	‡	‡	35	32	‡
25. Hyderabad State ..	71	69	68	173	175	157	11	11	16	17	14	15	34	31	35
26. Jammu and Kashmir State.	68	77	77	162	183	183	11	9	18	15	17	14	38	35	34
27. Madras States Agency	76	65	66	196	177	170	11	11	11	11	11	12	30	30	33
Cochin State ..	*75*	*67*	*66*	*195*	*178*	*170*	*11*	*11*	*10*	*12*	*9*	*11*	*30*	*30*	*32*
Travancore State ..	*78*	*65*	*65*	*200*	*180*	*171*	*11*	*11*	*10*	*11*	*10*	*11*	*31*	*30*	*32*
Other Madras States	*59*	*	*	*148*	*	*	*11*	*11*	*	*	*	*	*32*	*	*
28. Mysore State ..	68	66	64	174	174	163	12	11	16	16	15	16	33	31	31
29. North-West Frontier Province (*Agencies and Tribal Areas*).	3	*	*	205	*	*	..	6	*	*	*	*	37	*	*
30. Punjab States ..	59	72	63	144	184	163	15	12	18	16	14	14	36	33	35
31. Punjab States Agency	70			179			13	11					35		
32. Rajputana Agency ..	72	74	63	175	189	151	9	10	12	14	10	12	34	31	37
33. Sikkim State ..	73	67	72	197	180	186	13	14	16	17	15	17	30	29	31
34. United Provinces States	67	62	66	158	145	152	9	10	12	14	12	14	36	35	36
35. Western India States Agency.	76	§	§	177	§	§	10	12	§	§	§	§	34	§	§

* Figures not available. † Included against Punjab. ‡ Included against Central India Agency.
§ Included against Bombay for past censuses.

SUBSIDIARY TABLE V.

Proportion of children under 10 and of persons over 60 to those aged 15—40 in certain religions; also of married females aged 15—40 per 100 females.

Religion.	Proportion of children, both sexes per 100.		Proportion of persons over 60 per 100 aged 15—40.		Number of married females aged 15—40 per 100 females of all ages.
	Persons aged 15—40.	Married females aged 15—40.	Males.	Females.	
India.					
All Religions	69	170	10	10	34
India Proper.					
All Religions	69	169	10	10	35
Hindu	67	164	10	10	35
Muslim	74	178	10	9	36
Sikh	71	192	15	15	33
Tribal	82	196	9	9	33
Burma.					
All Religions	62	205	12	12	26
Burmese	65	206	14	13	25

SUBSIDIARY TABLE VI.

Variation in population at certain age periods.

Province, State or Agency.	Period.	Variation per cent. in population (Increase +). (Decrease—).					
		All Ages.	0—10	10—15	15—40	40—60	60 and over.
1	2	3	4	5	6	7	8
India	1881—1891	+11·2	+16·1	+4·3	+10·8	+9·7	+8·0
	1891—1901	+1·8	—5·1	+14·5	+2·3	+5·2	+0·3
	1901—1911	+6·6	+9·7	—1·7	+7·3	+5·1	+8·6
	1911—1921	+0·9	+0·1	+8·5	—1·0	+1·1	+3·1
	1921—1931	+10·9	+14·5	+10·6	+15·1	+3·1	—14·9
Ajmer-Merwara	1881—1891	+17·7	+20·1	+55·5	+5·5	+23·2	+36·2
	1891—1901	—12·1	—44·5	+8·4	+5·1	—4·3	—34·5
	1901—1911	+5·1	+53·5	—39·6	+0·8	—1·7	+20·5
	1911—1921	—1·2	—4·4	+57·5	—10·9	+1·3	+7·2
	1921—1931	+13·1	+23·3	+7·1	+15·8	+3·6	—14·7
Andaman and Nicobar Islands ..	1901—1911	+52·4	+249·4	+204·9	+42·9	+22·5	+38·7
	1911—1921	+5·5	—14·2	+35·4	+27·3	—20·3	—32·0
	1921—1931	+6·9	+97·9	+32·7	—5·6	—11·1	—21·6
Assam	1881—1891	+15·5	+14·1	+25·5	+16·4	+11·8	+9·8
	1891—1901	+7·4	+4·2	+7·1	+12·2	+7·0	—9·7
	1901—1911	+15·2	+19·8	+9·8	+12·6	+16·4	+18·8
	1911—1921	+13·2	+8·5	+28·4	+12·5	+15·4	+11·2
	1921—1931	+15·7	+17·7	+16·7	+18·8	+7·8	—4·6
Bengal	1881—1891	+7·5	+9·6	+11·5	+7·9	+3·2	—1·6
	1891—1901	+7·7	+6·8	+15·1	+9·4	+6·7	+1·2
	1901—1911	+8·0	+9·3	+5·8	+10·1	+3·6	+0·9
	1911—1921	+2·8	—1·2	+8·3	+5·3	+2·5	—5·9
	1921—1931	+7·3	+8·7	+10·6	+9·0	+3·5	—14·6
Bihar and Orissa	1901—1911	+8·1	+11·5	+4·6	+8·3	+4·8	+6·1
	1911—1921	—1·2	—5·5	+4·9	—0·8	+2·8	—5·5
	1921—1931	+11·5	+14·8	+8·2	+14·6	+7·9	—12·2
Bombay	1881—1891	+15·8	+22·3	—3·5	+14·3	+19·2	+28·7
	1891—1901	—3·5	—12·3	+21·2	—3·0	—1·2	—12·6
	1901—1911	+6·3	+8·4	—10·5	+8·7	+7·5	+12·8
	1911—1921	—1·5	—0·1	+9·8	—5·4	—2·8	+3·5
	1921—1931	+13·4	+16·1	+13·8	+18·4	+4·5	—14·5
Burma	1881—1891	+24·6	+19·6	+22·9	+28·6	+23·1	+30·1
	1891—1901	+21·3	+22·3	+13·2	+23·8	+22·1	+14·7
	1901—1911	+16·2	+15·3	+24·7	+14·2	+17·4	+15·5
	1911—1921	+9·4	+3·2	+9·1	+11·8	+15·3	+5·6
	1921—1931	+11·2	+16·8	+10·4	+12·7	+4·8	—3·1

Province, State or Agency.	Period.	Variation per cent. in population (Increase +). (Decrease —). All Ages.	0—10	10—15	15—40	40—60	60 and over.
1	2	3	4	5	6	7	8
Central Provinces and Berar ..	1881—1891	+10·7	+11·5	+18·3	+6·6	+12·3	+11·8
	1891—1901	—7·9	—21·8	+4·1	+0·1	—4·0	—30·5
	1901—1911	+17·9	+33·5	—11·3	+15·0	+15·0	+42·2
	1911—1921	—0·3	—2·1	+27·4	—8·1	+3·0	+10·3
	1921—1931	+12·6	+10·8	+8·5	+23·4	+4·9	—17·5
Coorg	1881—1891	—2·9	+10·6	—18·6	—8·3	+8·1	+8·2
	1891—1901	+4·4	—3·9	+33·8	+1·8	+7·1	+9·4
	1901—1911	—3·1	—7·4	—13·6	—1·1	+3·6	+12·1
	1911—1921	—6·4	+1·8	—5·8	—11·1	—6·4	+8·3
	1921—1931	—0·3	—3·4	+4·5	+2·7	—3·5	—19·8
Delhi	1921—1931	+30·3	+34·9	+47·2	+36·1	+7·8	—8·2
Madras	1881—1891	+18·5	+29·2	—3·0	+16·1	+21·5	+23·9
	1891—1901	+7·8	+4·3	+31·3	+3·3	+11·6	+6·3
	1901—1911	+8·4	+3·9	+2·7	+11·8	+10·2	+14·7
	1911—1921	+2·2	—0·8	+5·5	+3·5	+0·8	+4·6
	1921—1931	+10·3	+16·7	+7·4	+14·3	+2·3	—15·6
North-West Frontier Province ..	1881—1891	+17	+33	+2	+26	—8	—43
	1891—1901	+10	—3	+38	+3	+33	+106
	1901—1911	+7	+9	+6	+3	+11	+16
	1911—1921	+3·8	—2·1	+1·9	+7·9	+3·7	+12·3
	1921—1931	+7·7	+8·3	+18·8	+14·6	—4·3	—31·0
Punjab	1901—1911	—2·4	+0·3	—6·2	—1·9	—3·2	—4·6
	1911—1921	+5·5	+10·5	+10·3	—0·6	+4·0	+18·2
	1921—1931	+13·5	+14·9	+17·1	+20·6	+3·4	—14·2
United Provinces of Agra and Oudh ..	1881—1891	+6·3	+9·9	—0·3	+5·5	+6·1	+9·5
	1891—1901	+1·6	—3·2	+12·2	+1·6	+4·3	—4·2
	1901—1911	—0·9	—1·1	—4·1	+0·7	—1·6	—3·0
	1911—1921	—3·1	—0·3	—3·7	—5·5	—2·1	—0·3
	1921—1931	+6·7	+12·5	+7·1	+11·2	—3·8	—21·6
Baroda State	1881—1891	+10·5	+14·6	—0·8	+10·9	+9·1	+16·7
	1891—1901	—19·2	—35·6	+1·1	—12·4	—14·7	—40·6
	1901—1911	+4·1	+22·0	—28·4	+2·2	+4·9	+20·9
	1911—1921	+4·6	+6·1	+42·5	—7·1	+8·7	+23·0
	1921—1931	+14·9	+17·1	+13·1	+18·0	+8·4	+4·5
Central India Agency	1921—1931	+10·6	+10·8	+10·5	+18·2	+1·3	—22·9
Cochin State	1891—1901	+12·3	+11·8	+18·4	+11·6	+11·1	+9·1
	1901—1911	+13·1	+12·8	+7·9	+14·4	+13·7	+15·8
	1911—1921	+6·6	+5·8	+11·6	+2·6	+11·6	+11·5
	1921—1931	+23·1	+33·1	+18·9	+19·2	+20·5	+17·9
Gwalior State	1901—1911	+5·9	+30·8	—12·9	—1·3	+5·0	+14·2
	1911—1921	+3·0	+7·5	+30·0	—6·1	+1·3	+18·9
	1921—1931	+10·3	+9·6	+16·9	+17·6	—1·1	—24·1
Hyderabad State	1881—1891	+19·2	+26·9	+2·7	+17·0	+19·9	+30·2
	1891—1901	—3·4	—14·2	+18·7	—2·8	+3·4	—12·2
	1901—1911	+20·0	+28·8	+3·1	+18·0	+18·9	+36·6
	1911—1921	—6·8	—8·5	+6·9	—10·2	—6·6	+0·1
	1921—1931	+15·8	+26·5	+5·8	+23·0	+2·4	—18·8
Jammu and Kashmir State ..	1891—1901	+15·0	+8·0	+48·1	+13·2	+14·1	+14·1
	1901—1911	+6·8	+8·2	+1·6	+8·6	+2·6	+9·5
	1911—1921	+5·0	+5·1	+7·7	+4·9	+1·2	+9·1
	1921—1931	+11·9	+8·2	+15·0	+22·7	+3·2	—24·0
Mysore State	1881—1891	+18·1	+42·1	—22·3	+10·9	+28·6	+49·6
	1891—1901	+12·1	+9·0	+59·5	—0·7	+20·8	+21·3
	1901—1911	+4·8	—4·4	+3·9	+12·7	+0·4	+15·2
	1911—1921	+3·0	+8·0	—0·2	+3·8	—5·3	+7·2
	1921—1931	+9·7	+15·6	+13·4	+13·3	—0·5	—19·0
Rajputana Agency	1901—1911	+6·9	+32·5	—24·5	+4·4	+3·2	+8·5
	1911—1921	—6·5	—1·2	+26·6	—16·6	—8·8	+1·2
	1921—1931	+14·0	+16·6	+15·1	+19·2	+5·0	—13·0
Travancore State	1891—1901	+15·4	+21·5	+21·4	+14·3	+9·3	+0·4
	1901—1911	+16·2	+19·1	+19·4	+13·6	+14·6	+19·8
	1911—1921	+16·9	+16·1	+22·5	+16·2	+15·6	+16·7
	1921—1931	+27·2	+44·4	+20·9	+20·7	+21·4	+21·3
Western India States Agency ..	1901—1911	+7·3	+25·1	—32·4	+1·9	+22·4	+53·0
	1911—1921	+0·5	+7·7	+47·6	—13·8	+2·0	+11·1
	1921—1931	+12·9	+12·1	+13·5	+18·6	+5·2	—1·4

NOTE.—Column 3 shows variation in population enumerated by age, not in total population.

SUBSIDIARY TABLE VII.

Reported birth rate by sex and province.

Province, State or Agency.	Number of births per 1,000 of total population at each year.																			
	1921.		1922.		1923.		1924.		1925.		1926.		1927.		1928.		1929.		1930.	
	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
Ajmer-Merwara	16·6	14·5	16·1	14·2	17·3	15·3	18·1	15·2	17·8	15·4	17·0	14·4	16·5	13·9	18·1	15·2	18·8	15·6	18·4	15·2
Assam	29·4	29·8	28·0	28·8	28·4	29·2	30·7	31·3	28·7	29·4	30·4	31·2	29·9	30·5	30·9	31·5	32·4	33·1	30·8	31·9
Bengal	28·1	27·9	27·5	27·1	29·7	29·5	28·9	28·8	29·0	28·6	26·6	26·4	26·7	26·4	28·3	28·0	27·8	27·6	25·1	25·0
Bihar and Orissa	36	33	37	34	39	36	37	34	37	34	39	36	39	36	40	37	37	35	37	35
Bombay	32	33	32	32	35	35	35	36	34	35	36	37	36	38	38	38	38	39	37	38
Burma	15·3	14·5	15·0	14·3	14·8	14·0	13·7	12·8	12·5	11·8	13·3	12·8	12·0	11·4	12·3	11·7	12·4	11·8	13·4	12·7
Central Provinces and Berar ..	19·5	18·4	18·3	17·5	23·4	22·3	22·6	21·6	22·5	21·4	23·6	22·5	23·4	22·2	23·9	22·6	22·6	21·4	24·5	23·2
Coorg	14·0	13·4	13·8	12·3	13·3	12·3	10·9	10·3	9·7	9·2	11·8	11·0	10·1	9·1	9·2	8·8	11·5	10·7	12·3	11·3
Delhi	21·7	19·9	21·4	19·9	21·6	19·4	21·2	19·2	20·2	18·5	18·9	18·1	18·7	16·9	21·7	19·6	20·6	19·3	20·7	19·2
Madras	13·8	13·2	15·2	14·6	16·6	15·9	17·4	16·7	16·5	15·9	17·5	16·9	17·5	16·9	17·8	17·1	17·9	17·2	18·7	17·7
North-West Frontier Province	26·5	25·3	23·2	21·9	27·0	25·6	26·7	24·7	26·5	24·6	29·9	27·5	29·0	26·8	32·3	29·6	30·5	28·2	25·4	23·5
Punjab	22	20	20	18	22	20	20	18	20	18	21	18	21	18	22	20	21	19	20	18
United Provinces of Agra and Oudh.	18·1	16·3	17·1	15·3	19·1	17·0	18·2	16·4	17·1	15·2	17·8	15·8	18·9	16·9	19·5	17·4	17·3	15·4	18·6	16·6
Baroda State	23·1	21·9	25·8	24·4	26·7	25·7	28·2	26·7	26·0	24·9	26·7	24·8	25·3	24·4	24·6	23·5	26·2	25·2	28·4	26·7
Cochin State	16·4	14·7	15·4	13·8	14·0	12·8	13·3	12·3	12·8	11·7	15·0	13·8	15·3	14·1	15·3	14·5	17·2	15·9	17·3	15·6
Gwalior State	5·8	4·7	5·8	4·7	5·9	5·1	*	*	7·1	6·2	11·8	10·9	11·7	10·7	13·7	13·2	15·1	14·3	12·9	13·8
Mysore State	8·7	8·2	9·4	8·9	9·5	9·0	9·5	8·9	8·9	8·6	10·7	10·2	9·7	9·2	9·6	9·1	10·2	9·6	10·3	9·7
Travancore State	18·5	18·2	17·2	17·1	16·5	16·2	16·8	16·7	14·1	13·5	17·1	15·9	18·9	18·1	19·7	18·6	20·8	19·7	22·5	21·7

* Figures not available.

N.B.—The methods of calculating the rates for this table and Table VIII followed by different provinces are not consistent. Ajmer-Merwara, Assam, Bihar and Orissa, Bombay, Central Provinces and Berar, Coorg, North-West Frontier Province, Gwalior, Cochin and Mysore have calculated the rates on the 1921 population; Bengal, Burma, Delhi, Punjab, United Provinces of Agra and Oudh, Baroda and Travancore have allowed for annual increases in population. Madras gives figures on both bases, the latter being adopted here. In the case of the United Provinces the births are calculated per 1,000 of population and not per 1,000 of the appropriate sex.

SUBSIDIARY TABLE VIII.

Reported death rate by sex and province.

Province, State or Agency.	Number of deaths per 1,000 of total population at each year.																			
	1921.		1922.		1923.		1924.		1925.		1926.		1927.		1928.		1929.		1930.	
	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
Ajmer-Merwara	27·7	29·1	21·4	23·1	25·4	25·8	24·5	25·5	22·9	24·2	30·4	33·2	25·0	27·5	25·5	26·3	29·5	30·7	27·3	28·6
Assam	26·9	25·9	27·0	26·6	24·0	22·9	27·6	26·9	23·1	21·8	23·2	22·8	23·4	23·4	22·2	22·0	21·0	20·8	21·4	21·3
Bengal	30·6	29·7	25·8	24·3	25·8	24·5	26·3	24·3	24·8	23·6	24·2	23·6	24·5	24·6	24·2	24·5	22·0	22·6	21·0	21·2
Bihar and Orissa	35	31	26	22	26	24	31	27	25	22	27	24	26	24	27	24	28	26	31	28
Bombay	26	26	24	23	26	26	27	28	23	24	28	29	25	26	27	28	30	32	29	30
Burma	22·2	20·7	22·8	21·1	21·1	19·7	21·5	20·2	18·5	17·4	20·3	19·2	19·0	17·5	20·3	19·0	20·7	19·6	19·1	18·6
Central Provinces and Berar ..	46·0	42·0	31·0	27·6	32·1	28·9	34·4	30·7	29·0	25·6	36·0	32·7	32·8	29·8	35·4	32·0	36·0	32·2	39·6	35·9
Coorg	28·0	29·3	32·9	36·6	27·7	30·9	39·0	43·5	30·9	30·7	34·2	34·1	30·9	31·9	30·5	32·1	22·6	25·1	24·2	26·5
Delhi	28·8	36·5	21·9	29·1	32·3	43·4	27·8	37·5	24·4	31·7	33·5	45·8	24·2	30·0	21·9	29·3	27·5	35·0	23·0	30·4
Madras	10·2	10·0	10·6	10·2	10·9	10·8	12·1	11·7	11·9	11·6	12·3	12·0	11·6	11·3	12·5	12·1	11·9	11·5	11·8	11·5
North-West Frontier Province	30·3	29·8	20·8	20·6	22·5	23·0	27·9	31·6	19·0	18·8	20·6	21·0	21·4	20·6	18·3	18·6	22·1	23·2	21·2	20·5
Punjab	30	31	21	22	29	32	39	44	27	30	33	36	25	26	22	23	25	27	26	27
United Provinces of Agra and Oudh.	40·0	39·1	25·8	24·5	23·9	22·9	28·4	27·7	25·0	23·8	25·1	24·1	22·5	21·4	23·4	23·1	23·3	22·8	26·0	25·3
Baroda State	15·7	14·4	19·9	18·2	22·1	20·3	20·8	19·4	18·5	17·2	22·8	21·8	17·8	17·4	20·1	18·2	21·4	19·7	23·5	22·3
Cochin State	10·9	9·5	10·2	8·6	11·0	9·4	8·6	7·6	8·8	8·1	8·9	7·8	10·7	9·3	9·9	8·2	9·3	8·3	11·3	10·1
Gwalior State	5·5	4·9	4·7	4·3	5·6	4·9	*	*	6·2	5·2	9·8	7·6	9·8	9·9	10·8	9·3	11·1	9·8	14·8	12·7
Mysore State	7·6	7·0	7·7	7·2	8·5	8·0	11·0	10·3	9·2	8·5	7·7	7·3	7·4	6·9	8·3	7·7	7·4	7·1	7·9	7·6
Travancore State	12·9	11·2	11·9	10·3	11·5	10·0	11·6	10·0	9·2	8·0	8·4	7·6	9·4	9·0	9·2	8·4	10·9	10·1	10·0	9·6

*Figures not available.

APPENDIX TO CHAPTER IV.

(*W. H. Shoobert*).

A Nagpur centenarian.

The following extract is taken from the Census Report on the Central Provinces and Berar and relates to an aged wrestler of the name of Siddi Wastad, son of a Negro father and an Arab mother, and now for many years a resident of Nagpur.

"Probably the oldest man in the Province is Siddi Wastad, a retainer of the family of Sirdar Venkatrao Gujar of Nagpur City.....In Nagpur he is generally supposed to have passed his 150th year.... .....He was one of the famous wrestlers at the court of His Highness the Maharaja Khanderao Gaikwar, father of the present Ruler of Baroda, and must have been almost past his prime as an athlete in about 1850 A. D. He claims to remember the war in Mysore and the death of Tippu Sultan as incidents of his youth. He also saw the last Moghul Emperor and his predecessor. The old man, of course, remembers the Indian Mutiny of 1857 very well and recalls that when he first went to Lahore from Baroda he travelled by road, because there was no railway.

He visited Nagpur twice when he was residing at Baroda and was eventually employed as a professional wrestler and instructor in physical training for Krishnarao Abasaheb, the father of Sirdar Venkatrao Gujar. This was about the year 1855 and as Siddi Wastad was reputed to have a son of sixty years in Baroda at the time, it would seem probable that the date of his own birth was soon after 1775 A. D. When he came to Nagpur to live with the Gujar family there was no railway line but land had been acquired for constructing a rail road and earth-work was in progress. His arrival in the City was just before the destruction of the Mahal by fire. Even allowing for considerable exaggeration, his age would be about 130.

Sirdar Venkatrao's father....was, when Siddi Wastad was first employed as his trainer, about 16 or 17 years of age.....The old athlete has now been living in Sirdar Venkatrao Gujar's house for over 75 years and his influence in the family has been very great indeed. It has been the custom in the past for every famous wrestler visiting Nagpur to make a point of paying his respects to Siddi Wastad before giving any exhibition. His own final public contest was with a sepoy in the old military cantonment at Amraoti. He defeated this man and became unpopular among the troops as a result.

Until the year of the influenza epidemic of 1918 this remarkable man remained in perfect health. He was himself attacked by the scourge and in the ten years following is reported to have had attacks of paralysis and cholera. Since then he has gradually lost his teeth and his hair has turned white. Until 1918 it was not his habit to lie down or to go to bed. A short nap in a chair at night was quite enough for him, and he offered his prayers five times a day. His diet up to that time was about 6 lbs. of flour for one meal, apart from vegetables, rice, mutton and four seers of milk each day. His meal used to take him full three hours when his teeth were sound and he now eats, apparently heartily, on his hardened gums. When ill, he has never taken doctor's drugs but he prepares his own medicines and medicated oils and treats himself.

How greatly he is held in awe by the family of his employer and friend is indicated by the fact that he will not allow the room in which he resides to be swept by anybody. Once during his absence Sirdar Venkatrao himself ventured to attempt to clean the room, but he found three large scorpions underneath the prayer rug ' with the result.....that he was severely admonished for this venture ! '

REPORT ON THE ESTIMATED AGE-DISTRIBUTION OF THE INDIAN POPULATION AS RECORDED AT THE CENSUS OF 1931 AND THE RATES OF MORTALITY DEDUCED FROM A COMPARISON OF THE CENSUS RETURNS FOR 1921 AND 1931.

I had the honour to be invited by the Government of India to make an investigation into the estimated age distribution of the Indian population as indicated by the Census figures of 1931 and to prepare Life Tables as deduced by a comparison of the Census records of 1931 with one or more of the preceding Census enumerations; and now beg to submit the results of my investigation.

This is the sixth of a series of investigations into the Mortality of the Indian population conducted in connection with each decennial Census from 1881 onwards. The first three were made by the late Sir George Hardy, the fourth by the late Mr. T. G. Ackland and the fifth in connection with the 1921 Census by Mr. H. G. W. Meikle, the then Actuary to the Government of India.

PROVINCES DEALT WITH IN THIS REPORT.

The larger Feudatory Indian States that conduct separately their own Census operations were not included in any of the previous investigations. The areas dealt with in these investigations were mainly British Provinces and the smaller Feudatory States under the direct political control of the Provincial administration. I decided, however, to conduct the present investigation on the Census Statistics available for the whole Indian Empire including all the Feudatory States whether small or large. The Indian Subcontinent, covering an area of more than 1,800,000 square miles and containing a population of almost 353 millions, was divided for the purpose of my enquiry into the following ten large geographical units:

(1) Sind, Baluchistan and North-West Frontier Province.

(2) Punjab, Delhi and Kashmir.

(3) Rajputana, Ajmer-Merwara, Gwalior and Central India Agency.

(4) The United Provinces.

(5) Central Provinces, Berar and Hyderabad State.

(6) Bihar and Orissa.

(7) Bengal and Assam.

(8) Bombay Presidency (excluding Sind), Baroda State and the Western India States.

(9) The Madras Presidency, Coorg, Mysore, Travancore and Cochin States.

(10) Burma (Burmans only excluding foreign born).

Each British Province includes the small State or States, if any, in direct political relationship with it.

Though Sind is politically a part of Bombay, in view of its great distance from Bombay and the greater affinity of the population of Sind to its immediate neighbours, it was decided to amalgamate it with Baluchistan and North-West Frontier Province.

The data supplied to me for the purpose of my investigation included:—

(1) The Census Returns of 1931 showing in each Province and for each sex the numbers living at the ages of 0, 1, 2, 3 and in alternate ternary and septenary groups 4-6, 7-13, 14-16, 17-23, etc., with one large group at the end of 74 and over.

(2) Specimen Schedules, in connection with the 1921 Census, showing out of a selected number, usually about 100,000 of each sex in each Province, the numbers recorded as living at each individual age last birth-day throughout life.

(3) Birth-place Returns showing—

(a) the number of emigrants born in each Province or State and enumerated elsewhere, and

(b) the number of immigrants enumerated in each Province or State and born elsewhere.

(4) The Provincial and All-India Census Reports on the 1921 Census.

(5) The Actuarial Reports based on the 1921 and the preceding Censuses.

No returns at individual ages, except those at the very early ages from 0 to 3, and no specimen schedules showing the distribution of the population at each age, except in the case of the Punjab and Madras out of a sample of 100,000 in each sex, were available in connection with the 1931 Census. This has proved to me a very great handicap* and I could not apply to the 1931 Census certain lines of investigation I made with the aid of the specimen schedules available in the Actuarial Reports of the earlier Censuses, especially in connection with the enquiry whether the very large errors in the Age Returns in India show a tendency to diminish or increase. Nor are their uses confined to the study of errors in age as there are bound to be other lines of Statistical Research in which individual Age Returns of the population will be of great help. By the time the Government of India requisitioned my services in connection with the Actuarial Analysis of the 1931 Census, I learnt to my disappointment that only ternary and septenary groups above referred to were available. I do not think it should entail any great expense if Tables are given for each Province showing the distribution of the population according to individual ages in each sex. The population statistics of England and Wales are available for each age. If, however, for one reason or other, this is considered impracticable for the next few decades in the Census history of India I cannot too strongly recommend that specimens showing distribution of the population at each age should be collected in each Province and in each State that conducts its own Census operations. The characteristics of the specimen are summarised in statistical language in the words "Representative Random Sample". A sample of 100,000 may be a representative one for a small area but may not be so for a large one. The magnitude of the sample should, therefore, depend on the area dealt with. Where again a large area is concerned, the sample should be taken from two or more localities widely separated from one another; otherwise the sample will neither represent the entire area nor be a random one.

SECTION I.

Characteristics of the Decennium 1921-1931.

1. The method to be adopted in the Actuarial Analysis of the Census material of India is very largely influenced by the economic and hygienic conditions prevailing in the decade preceding the Census. A population of which 90 per cent. or more is rural, subsisting mainly on the produce of the soil and cattle, leading a practically insular life in the village of its occupation, with its needs necessarily brought down to the barest minimum, should be extremely sensitive to the caprice of nature. If the rainfall is seasonal and sufficient a good harvest is reaped and the population, remunerated in most cases in kind, moves in harmony with the season. With bountiful harvest, a feeling of optimism permeates the entire atmosphere and conditions are conducive to health and abundant supply of babies. On the other hand, a lean harvest, engendered by the failure of the monsoon, leads to undernourishment and to contamination of any available scanty water supply which makes epidemics of the nature of Cholera, particularly connected with the bowels, break out. The death rate soars very high claiming a very large toll from the very young and the very old and underfeeding due to scarcity usually gives the people, under such circumstances, very little stamina to withstand the attack. The fall in the birth rate, combined with the very high mortality affecting childhood, leaves a deep chasm in the age curve noticeable in the Age Returns of several subsequent decennial Censuses just as a permanent scar from a deep wound.

2. If the next few years after a famine happen to be good or even normal monsoon years, the surviving population consisting mainly of those that have weathered the storm is known to have more than made up for the children lost

* It is usual to have 100,000 individuals of each sex sorted by individual ages for each province. This was not done in 1931 as the Actuary to the Government of India advised that it would not be necessary if Mr. Meikle's method of grouping were adopted.—J. H. H.

during the famine years. By the side of the deep chasm in the age curve above referred to, there would usually appear a big hump and as it very rarely happens that any Province in India is uninterruptedly immune from these seasonal disturbances for a decennial period, the age curve is generally full of undulations at successive short ranges which are either accentuated or masked by the preference for particular digits and the systematic errors in the ages returned by the population. To bring out the true or nearly true age curve from such irregular data, the Actuarial microscope has to be used rather very minutely and the method adopted is made to suit the nature of the statistics presented to the Actuary which in its turn is primarily influenced by the conditions obtaining in the decennium under consideration.

3. In illustration of the point made out in the last two paragraphs, the following Table showing the number of children under 5 per 10,000 of the total population in India in each of the Census enumerations may be found of interest. Corresponding figures for some representative countries in Europe and the United States of America are given which bring out in relief the very large fluctuations in the Indian birth rate due to the effect of famines and the rapidly recuperative nature of the population during normal or sumptuous years.

TABLE I.

Number of children under 5 per 10,000 of population.

Country.	1880-81.	1890-91.	1900-01.	1910-11.	1920-21.	1930-31.
England and Wales ..	1,356	1,225	1,143	1,068	877	..
Germany	1,365	1,300	1,308	1,206	634	..
Sweden	1,232	1,218	1,147	1,121	955	..
Belgium	1,237	1,159	1,171	1,024	694	..
France	923	872	862	886	818	..
Switzerland	Not available.		1,140	1,076	848	..
United States ..	1,379	1,222	1,210	1,156	1,095	..
India	1,369	1,468	1,297	1,379	1,258	1,529

4. The deficiency in the number of young children in the 1881 enumeration is to be traced to the famine of 1876-78 which affected the Provinces of Madras and Bombay. It will be noticed that, in spite of the large reduction of the young shown in the returns of two very large Provinces, the total for India was appreciably in excess of several European countries and was only slightly in defect of the number for the United States of America. The 1891 Census followed a period of general prosperity which is evidenced in the very large proportion of children in the age distribution of the population. The widespread nature of the famine of 1899-1901 is reflected in the very small number of children under 5 returned at the 1901 Census which low record has been beaten only by the 1921 enumeration. The conditions obtaining in the decennium preceding the 1911 Census, though generally free from scarcity and consequent famine, were less favourable than those of the period 1881-1891 as reflected in the number of children under 5 which, though appreciably in excess of the other countries brought in the comparison, is very much in defect of the high level reached in 1891.

5. The particularly low figure for 1921, lower than any previous famine record, bears eloquent testimony to the fact that the young ages were subject to a twofold depletion due to the selective incidence of the Influenza mortality of 1918-1919. The first wave was particularly fatal to children, while the second and the more virulent one, by claiming a very large toll from the adult ages and proving particularly fatal to women in pregnancy, had struck a heavy blow at the very source of child supply.

6. As against the large fluctuations in the number of children in India with the normality or otherwise of the conditions obtaining during the decade preceding the Census can be set the steady trend towards fall of the number of children in the Western countries due purely to sociological reasons.

7. Where the decade preceding the Census was subject to dire visitations such as famine and pestilence, the method adopted by the renowned Actuaries, who wrote the Reports in connection with the earlier Censuses, was to estimate average rates

of mortality by combining the data of the Census on hand with those of a few earlier Censuses, thereby eliminating, as far as this could be done, the effects of the disturbances above referred to.

8. Thus with respect to his 1881 Report, the late Sir George Hardy obtained average rates of mortality, firstly because the earlier Census enumeration was known to be extremely defective and secondly because of the famine of 1876-1878 which affected the two Provinces of Bombay and Madras. Since, however, the decennium ending with the 1891 Census was practically free from famine or epidemic that usually follows in the trail of a famine, he limited his investigation to a comparison of the 1881 and 1891 Census figures. The 1901 Census closely followed on the heels of the severe famine of 1899-1901, which affected extensive tracts in India, and also an epidemic of Plague. Sir George, therefore, deduced average rates of mortality by combining the Census figures of 1881, 1891 and 1901 by giving double weight to the 1891 Return. The decennium preceding the 1911 Census was, in spite of disturbances of moderate intensity in certain localities, taking the country as a whole, generally free from any calamitous visitation, and the late Mr. T. G. Ackland deduced rates of mortality relating to the decennium by combining the 1891 and the 1901 Census figures only. The conditions attending the 1921 Census were, however, exceptional. The population had not by then fully emerged from the devastating effects caused by the great Influenza epidemic which was estimated to have claimed as its victim nearly 7 per cent. of the total population of India. Mr. H. G. W. Meikle, the Actuary to the Government of India, who wrote the Report with the 1921 Census, with the view to deduce average rates of mortality, combined all the previous enumerations from 1881 onwards with the 1921 figures.

9. Though the decennium under consideration opened and closed in gloom, it has been on the whole a prosperous one. In the opening years of the decennium the effects of the Influenza epidemic that prevailed at the close of the last decade and the bad monsoon of 1920 were still evident. This position rapidly altered and a series of good monsoons followed interrupted only by floods notably in Bengal, Gujarât, Sind and South India. Famines were practically local and not very serious and the advancement in Medical Research minimised to a great extent deaths from Tropical diseases such as Cholera, Plague and Kala-azar. These favourable conditions are naturally reflected in the very large increase (10·6 per cent.) in the population which the decennium has witnessed. The closing years of the decennium, however, brought the position practically back to that of the opening ones, with this difference that towards the close there was considerably larger number of mouths to feed than at the commencement on practically identical economic conditions. Trade was depressed to an unprecedented level and the prices of agricultural products fell so low as to be entirely unremunerative to the cultivator. The consequent distress to a population of which nearly four-fifths live directly by agriculture could be easily imagined. Whether the prosperity of the few middle years of the decennium has been of such magnitude as to justify the very large increase of 10·6 per cent. of the population or in absolute figures 33,895,298, an increase which, in the words of Dr. Hutton, the Census Commissioner for India, is "a figure approaching equality with that of the total population of France or Italy and appreciably greater than that of such important European Powers as Poland and Spain" is a subject on which I shall have something to say in another section of this Report. Here I am mainly concerned with the fact that in the decade under consideration the population did contribute a very large—almost abnormally large—increase, apparently both by saving in deaths and by abundant supply of babies and on this account I felt justified in making use of the 1921 and 1931 Census figures only thereby confining my attention solely to the conditions obtaining in the decennium.

SECTION II.

On the peculiar nature of the Methods to be adopted in constructing Mortality Tables from Indian Census Returns.

1. In the preceding section of this Report attention was directed to the characteristics of the decennium under consideration being the main factor influencing the decision of the Actuary as to whether the mortality Table to be constructed should be an average one embodying the experience of more than one decennium or

should be confined only to that of the decennium preceding the Census. In this section I shall consider the peculiar novelty and difficulty of the problem of mortality Table construction as applied to this country caused by the fact that the records of vital occurrences are entirely undependable, which makes it necessary to discard the usual methods of construction of mortality Tables and adopt special ones as I explain below.

2. Where a reasonable amount of reliance can be placed on the ages and numbers returned at the Census enumeration and the records of deaths during the intercensal period, the method almost invariably employed to obtain the rate of mortality at each age of a given population is to compare the living at the various ages as recorded in the Census Returns with the registered deaths at the corresponding ages. The task of the Actuary becomes, under such conditions, comparatively easy for the analysed material will practically tell its own tale and smoothing or graduation will be required only with the view, on the one hand to arrive, very nearly, at that ideal flow of the rates of mortality from age to age that would have been obtained had the volume of statistics analysed not been limited in extent and to eliminate any small irregularities due to minor mis-statements of the age on the other. But the records of vital occurrences in India are yet deplorably undependable as will be evident from the following Table:—

TABLE II.

Comparison between enumerated and deduced population.

Province (British Territory only).	Variation 1921-1930 according to Vital Statistics (Excess of Births over Deaths +, Deficiency —). Total.	Variation 1921-1931 according to Census (Excess +, Deficiency —). Total.	Difference. Excess or defect of column 3 over column 2.
1	2	3	4
Assam	+450,854	+1,163,123	+712,269
Bengal	+1,463,484	+3,411,695	+1,948,211
Bihar and Orissa	+3,254,095	+3,682,158	+428,063
*Bombay	+1,728,161	+2,587,404	+859,243
Burma	+715,458	+1,454,954	+739,496
C. P. and Berar	+1,423,608	+1,594,963	+171,355
Delhi	+53,132	+147,794	+94,662
Madras	+4,398,902	+4,421,122	+22,220
N. W. F. Province	+94,759	+173,736	+78,977
Punjab	+2,428,382	+2,895,374	+466,992
United Provinces	+3,927,768	+3,033,694	—894,074
Total ..	+19,938,603	+24,566,017	+4,627,414

* Excludes Aden.

3. The natural assumption to be made, in drawing conclusions from the above Table, is that the censused figures are very nearly correct and all irregularities are traceable to records of Vital Statistics. As between the records of births and deaths, larger inaccuracies are naturally traceable to the former than to the latter. A study of the figures in the Table will show that Delhi, Assam and Bengal are almost in the vanguard of Provinces that maintain inaccurate vital records as the increases in the population of the decade in these Provinces traced through vital records are nearly 64, 61 and 57 per cent. respectively in defect of the increases revealed by the Census enumeration. Burma and the North-West Frontier Province closely follow with the respective deficiencies of 51 and 45 per cent. Bombay shows a deficiency of 35 per cent. The United Provinces show a large excess of 29 per cent. As this is an emigrating Province, the only explanation is that in this Province the records of deaths are more inaccurate than the

records of births. Madras alone, of all the Provinces, is remarkably accurate as the deficiency is only one-half per cent. It outpaces the second best Province—the Central Provinces and Berar—by a considerable distance as the deficiency in this Province is as much as 11 per cent. It might be possible to approach the censused population with very great accuracy through records of vital occurrences, even if the latter be inaccurately maintained and therefore subject to very large errors, provided such errors are of the same or nearly the same absolute magnitude. For, in arriving at the population on any date with the aid of the records of births and deaths, the numbers relating to births and deaths occcur with opposite signs and therefore the errors in these two records are of a compensatory nature. One is therefore forced either to assume that the records of vital occurrences in Madras are maintained up to a great degree of accuracy, or that both the records of births and deaths are teeming with inaccuracies and these inaccuracies happen by chance to be very nearly equal, so as to reproduce the censused population within an error of one-half per cent. As observed above, the records of births in all Provinces except the United Provinces are relatively more inaccurate than the records of deaths. With the Province of Madras, however, as between assuming that both the records of births and deaths are inaccurate or both of them are very accurate, I am inclined to the latter view which is also borne out by the relatively greater accuracy shown by that Province in the statement of ages as will be seen in the section on " Errors in Age ". It may, therefore, be of interest to construct mortality Tables for the Province of Madras according to the usual method of mortality Table construction when the records of births and deaths are dependable and compare the results so obtained with those deduced by making use of Census enumerations only. As, however, I have not been supplied with the full statement of deaths in Madras occurring in the decennium according to each age, this investigation could not be taken up before the time my Report was expected to be ready.

4. With the records of vital occurrences teeming with inaccuracies in each Province, as shown by the above Table, the Actuary has no course open but to make as best an estimate as he could of the rates of mortality prevailing amongst the population by making use of the Census enumerations only, without any reference to the records of births and deaths.

5. For the convenience of the reader who will not take anything on trust, I have tried to set out in the next few articles the *rationalé* of the method to be adopted when mortality Tables are constructed by making use of Census Returns only. As a hint, however, to such of the readers as would let anything in the nature of Mathematics alone, I have placed an asterisk to these articles which can safely be passed over. But they are requested to assume that for the construction of the mortality Table the Actuary requires a series of smooth numbers representing the mean population living from age to age in the period under consideration and also another set of smooth numbers denoting the rate at which the population has increased or decreased at each age in the same period.

Construction of Mortality Tables from Census Returns only.

*6. In countries where a reasonable degree of reliance can be placed on vital occurrences the only correct method of constructing a mortality Table is to make use of Census Returns along with the records of deaths. At the infantile ages, however, where the Census figures are subject to irregularities of a two-fold nature due to both overstatement of age and non-enumeration of infants, use has to be made of the records of births also in the quinquennium preceding the date of the Census to correct the Census figures relating to these early ages. If we are dealing with an ideal population where only as many die in a year as are born in the year, where there are no migration disturbances (called by Actuaries a Stationary Population) and where the adult population has come to such a high level of literacy as to give correct particulars at a Census, we shall arrive at the same results when constructing a mortality Table from Censuses alone as when we make use of both Census Returns and records of vital occurrences. If $P_x^{(1)}$ persons are recorded as having attained age x on their birthday preceding the Census date, their average age taking one with another can be assumed to be $x+\frac{1}{2}$. If at the Census taken 10 years later there are returned $P_{x+10}^{(10)}$ persons of

age $x+10$ last birthday, the latter will be the survivors from amongst the group of $P^{(1)}_x$ persons of age x last birthday recorded at the preceding Census and will be of average age $x+\frac{1}{2}+10$. Provided that the chief desiderata of a stationary population as to the constancy of birth and death rates as also immunity from migration disturbances are actually realized, the ratio $P^{(10)}_{x+10}/P^{(1)}_x$ may be taken as very nearly equivalent to ${}_{10}p_{x+\frac{1}{2}}$ which is the probability of surviving 10 years at exact age $x+\frac{1}{2}$. It will, however, be necessary to find the probability of surviving one year, instead of 10 years for the construction of the mortality Table, which can be obtained as follows :—

*7. Under the ideal conditions of a stationary population which we have assumed, it can be easily seen that the numbers returned at the latter Census at any age x will be identical with the numbers returned at the Census 10 years earlier at the same age. This equality will hold whatever may be the interval between the two Censuses. If two Censuses are taken with an interval of only one year separating them we shall obtain the equation† ${}_1p_{x+\frac{1}{2}}= P^{(2)}_{x+1}/P^{(1)}_x$ where ${}_1p_{x+\frac{1}{2}}$ is the probability of surviving one year at age $x+\frac{1}{2}$ and $P^{(2)}_{x+1}$ represents the population returned as of age $x+1$ last birthday at the latter of the two Censuses. Since the numbers returned at the same age in any two Censuses are identical we have $P^{(2)}_{x+1}/P^{(1)}_{x+1}=P^{(1)}_{x+1}/P^{(1)}_x$ so that ${}_1p_{x+\frac{1}{2}}=P^{(1)}_{x+1}/P^{(1)}_x$. It will be evident from an inspection of the above equations that given a stationary population the numbers returned at each age at one Census enumeration would easily supply the numerical values of the probabilities required for the construction of the mortality Table. But no community conforms to the rigorous conditions imposed for being called a stationary one and we shall have to modify our formula yielding numerical values of the probabilities of surviving at each age when the ideal requirements are relaxed one by one and we pass on from an imaginary stationary community to one actually met with subject to varying birth and death rates combined with disturbances due to emigration and immigration.

Varying Birth Rate with Constant Death Rate and no Migration Disturbance.

*8. Let us assume that the number of births has been increasing uniformly from year to year for a considerable number of years in geometrical progression while the death rate has been constant at each age and there has been no migration. On our assumptions, the number of births per annum increased from, say, l_0 in that period of one year just preceding the first Census date to $r^{10} l_0$ in that period of one year just preceding the next decennial Census date. Let us denote the number of children of age less than 1 (age 0 last birthday) returned at the earlier of the two Censuses we are considering by L_0. These are the survivors out of the l_0 births in the year preceding that Census. The population returned at age 1 last birthday will number $\frac{1}{r}L_1$, for, these are the survivors from amongst the $\frac{1}{r}.l_0$ births in that period of one year which commenced exactly two years before the Census date on the basis of a geometrical increase in the number of births. We shall therefore have the total population at each age last birthday returned at the first Census given as follows :—

L_0, $\frac{1}{r}L_1$, $\frac{1}{r^2}L_2$ .... $\frac{1}{r^{10}}L_{10}$....$\frac{1}{r^{20}}L_{20}$.... $\frac{1}{r^{100}}L_{100}$, etc. On the same assumption, the population returned at the next Census at each age last birthday will be as follows :—

$r^{10}L_0$, $r^9 L_1$, $r^8 L_2$....L_{10}, $\frac{1}{r}L_{11}$,.... $\frac{1}{r^{10}}L_{20}$....$\frac{1}{r^{90}}L_{100}$, etc.

The L's in the two series with the appropriate suffixes denote the population in each age that would have been returned had the number of births not varied from year to year, that is, on the assumption that all the conditions of a stationary population had been satisfied.

*9. The mean population at any age, meaning thereby the population that would have been returned had a Census been taken at a date exactly at the middle

† Students of Actuarial Science will note that the prefix 1 in ${}_1p_{x+\frac{1}{2}}$ is usually omitted.

point of the two decennial Censuses, is given by $\frac{1}{2} L_x \left(\frac{1}{r^x} + \frac{1}{r^{x-10}}\right)$, $\sqrt{\frac{L_x}{r^x} \cdot \frac{L_x}{r^{x-10}}}$ or $\frac{2L_x}{r^x + r^{x-10}}$, according as we take the Arithmetic, Geometric or Harmonic Mean. Let us denote the expressions by L^A_x, L^G_x and L^H_x respectively. It can easily be verified that $\frac{L^A_{x+1}}{L^A_x} = \frac{L^G_{x+1}}{L^G_x} = \frac{L^H_{x+1}}{L^H_x} = \frac{1}{r} \cdot \frac{L_{x+1}}{L_x} = \frac{1}{r}\ {}_1p_{x+\frac{1}{2}}$ That this result should be true whatever may be the mean population we are taking could have been foreseen inasmuchas it is true for the populations enumerated at each of the two Censuses we are considering. I could not take it for granted since it may not be evident to one and all of the readers. I have, however, assumed in the case under consideration the death rate to be the same as in the case first considered but only the birth rate to vary. The probability, therefore, of surviving one year at age $x + \frac{1}{2}$ is even now ${}_1p_{x+\frac{1}{2}} \left(= \frac{L_{x+1}}{L_x}\right)$ being identical with its value when all the conditions of a stationary population are satisfied. The natural conclusion to be drawn is that, whereas when a population has attained an absolutely stationary condition the number at any age of one Census enumeration, or, what is the same thing, of the intercensal (mean) population between two Censuses, divided by the number at the age next below yields the probability of surviving one year at the half age midway between the two ages, when one of the conditions, namely, constancy of births from year to year, is relaxed, the ratio above described no longer gives the required probability of survivorship, but we shall have to take into account the rate of increase of the population and multiply by this rate the ratio of the mean numbers at consecutive ages to obtain the probabilities of survivorship at each half age from which the mortality Table can be easily constructed.

*10. Since the population at age x of one Census becomes by survival that at age $x+10$ at the next decennial Census and both of them are the survivors to ages x and $x + 10$ in the two Censuses respectively out of births occurring in the same year, we can, by dividing the number returned at any age $x + 10$ at a Census by the number returned at age x at the preceding decennial Census, obtain the value of ${}_{10}p_{x+\frac{1}{2}}$ (the probability of surviving 10 years at age $x + \frac{1}{2}$) and thereby eliminate any necessity for bringing into account the rate of increase in the population. From the values of ${}_{10}p_{x+\frac{1}{2}}$ those of ${}_1p_{x+\frac{1}{2}}$ can be obtained by a suitable method of interpolation. Before, however, this method could be adopted, one has to be absolutely certain that the only cause contributing towards a return of varying numbers at the same age from one Census to another is variation in birth rate, of which the magnitude is exactly ascertainable, and the rate of mortality has been practically invariable and the population has also been immune from disturbances due to migration. Such conditions are ideal and are not true to populations that are usually met with. It might be observed in passing that with only varying birth rate, if Census-taking be an annual function, we shall obtain the value of ${}_1p_{x+\frac{1}{2}}$ at each central age by taking the ratio $P^{(2)}_{x+1}/P^{(1)}_x$ where $P^{(1)}$ represents the population at the earlier Census and $P^{(2)}$ at the Census taken one year later, and thereby avoid the necessity for ascertaining the rate at which the population has been varying due to variation in birth rate.

*11. With the view to make it easy for the general reader I have assumed the variation in the population to be brought about by the number of births increasing in a geometrical progression of constant common ratio r. The arguments will still hold if the variation be not at the uniform rate from year to year but at varying rates r_1, r_2, r_3, etc., and some of these r's may be greater and others less than unity so that the number of births may be increasing in some and decreasing in other years.

Varying Death Rate and Constant Birth Rate and no Migration Disturbance.

*12. I have so far considered the construction of a mortality Table from Census Returns alone firstly when the population satisfied all the conditions necessary for its being called a stationary one and secondly when only one of the conditions, *viz.*, constancy of the number of births from year to year, was relaxed. We can now assume the births to remain constant from year to year while the

death rate varies. When the birth rate alone varies, either uniformly at a constant rate r or at rates changing from year to year, the force or forces that bring about variation in the population returned at the same age in the several Census enumerations all act at one particular point of age, namely, at birth. When, however, variation in population is a result of continuously varying death rate only, the other conditions of a stationary population holding, these forces act at all age points and the variation at any age between two Census enumerations represents the cumulative effect of these forces from birth up to the age in question. In spite of this apparent complication, since on our assumption the variation in the Census material is introduced by an irregular flow only in rates of death from year to year and from age to age and the assignment of a numerical value of this factor (rate of death) being the object of our enquiry, we shall yet be able to obtain the average value of ${}_{10}p_{x+\frac{1}{2}}$ by the ratio $P^{(10)}_{x+10}/P^{(1)}_{x}$ as evidently the population numbering $P^{(10)}_{x+10}$ at the later Census at age $x+10$ are the survivors out of $P^{(1)}_{x}$ at age x at the earlier Census when the latter were subject to irregular incidence of mortality during the intercensal period. The quantity $1-P^{(10)}_{x+10}/P^{(1)}_{x}$ would give the average value of the probability of death within 10 years at age $x+\frac{1}{2}$ prevailing in the intercensal period and the probabilities of death or survival for one year at each half age will have to be obtained by interpolation though the resulting values might be very rough and require graduation due to the irregular incidence of mortality. The results of two annual Censuses will have to be made use of if interpolation is to be avoided as in the case when only the birth rate varied.

*13. If P^{M}_{x} be the mean population at age x between two decennial Censuses, whether it is the Arithmetic, Geometric or Harmonic mean or mean computed in any other manner, the ratio P^{M}_{x+1}/P^{M}_{x} does not yield the value of ${}_{1}p_{x+\frac{1}{2}}$ as it does when the population has been absolutely stationary. The cause is not far to seek if it is remembered that on our assumption P^{M}_{x+1} and P^{M}_{x} which represent survivors to the middle date of the intercensal period out of births in different, though consecutive, years have been depleted differently by varying incidences of mortality from birth up to age x in each case and the ratio P^{M}_{x+1}/P^{M}_{x} instead of depending upon the mortality rate from age $x+\frac{1}{2}$ to $x+\frac{1}{2}+1$ is coloured by the varying incidences of mortality above referred to at all ages below age x. To make the ratio P^{M}_{x+1}/P^{M}_{x} yield the value ${}_{1}p_{x+\frac{1}{2}}$ we must multiply it by a quantity r' which represents the ratio of the cumulative effect of mortality from birth to age x for the mean population P^{M}_{x} to the corresponding effect of mortality for the mean population P^{M}_{x+1}. The problem in this case is analogous to that when only the number of births varied, for, it will be remembered in that case to obtain the value of ${}_{1}p_{x+\frac{1}{2}}$ it was necessary to multiply the ratio P^{M}_{x+1}/P^{M}_{x} by r where r is the ratio of the number of births in that year of which P^{M}_{x} are the survivors to the births in the year of which P^{M}_{x+1} are the survivors.

*14. Where, however, it is not possible to ascertain and make allowance for the varying incidences of mortality in the two quantities P^{M}_{x} and P^{M}_{x+1} above referred to, due to the death registers not having been accurately maintained, the only method to be adopted is to ascertain for each age an average rate of increase or decrease in the population for the intercensal period and starting from the mean population between the two Censuses as base obtain the population that would have been returned six months anterior and six months posterior to the middle date of the intercensal period from which the values of ${}_{1}p_{x+\frac{1}{2}}$ can be easily deduced.

Varying Birth and Death Rates.

*15. It can now be seen that when both the birth and death rates vary the equation $P^{(10)}_{x+10}/P^{(1)}_{x} = {}_{10}p_{x+\frac{1}{2}}$ will yet hold. For $P^{(10)}_{x+10}$ and $P^{(1)}_{x}$ being persons at ages $x+10$ and x in the latter and earlier Censuses respectively are the survivors out of the births occurring in the same year and in taking the ratio of the one to the other the disturbing effect in the constant flow of population from birth to age $x+\frac{1}{2}$ due to variation in the birth rate (the r of the geometric increase or decrease) is eliminated. Again the same fact, namely, that the populations $P^{(10)}_{x+10}$ and $P^{(1)}_{x}$ relate to births in the same year, is responsible for eliminating in the ratio $P^{(10)}_{x+10}/P^{(1)}_{x}$ the rates of mortality from birth to age $x+\frac{1}{2}$ and making it depend solely on the rates of mortality for the

period of 10 years after age $x+\frac{1}{2}$. From the values of ${}_{10}p_{x+\frac{1}{2}}$ those of ${}_{1}p_{x+\frac{1}{2}}$ and then of ${}_{1}p_{x}$ can be obtained by interpolation.

*16. The question might naturally be asked at this stage as to why this apparently easy method of arriving at the values of ${}_{10}p_{x+\frac{1}{2}}$ at each half age should not be adopted. The answer is not far to seek if it is remembered that all along we have assumed that the individuals composing the community have come to realize the importance of giving correct particulars both as to numbers and ages at the Census enumeration and do give them. But the necessity for employing the rather out of the way method of constructing the mortality Table by comparing two or more Census enumerations only, without any reference to the record of vital occurrences in the intercensal period, arose out of the fact that the latter were quite unreliable. It will, therefore, be entirely unjustifiable to assume that the ages returned at the Censuses are correct when the birth and death records are entirely undependable. What usually happens with every step taken forward in the scale of literary evolution of a community is that the accuracy of the ages recorded in the death registers precede that of Census Returns. Apart from the fact that Law, under pain of penalties, compels the registration of births and deaths, the usual inducement for overstatement or understatement at particular periods of life which exist with respect to living persons at a Census enumeration is very nearly absent when giving the ages of the dead. That is why it is often said that the only correct method of constructing a mortality Table is to compare the living with the dead with further help from the register of births at infantile ages.

*17. It will hardly need any demonstration to show that, when the Census material is subject to variations due to the combined effect of irregular birth and death rates, the ratio P^{M}_{x+1}/P^{M}_{x} obtained from the mean of the two Census enumerations will not yield the value of ${}_{1}p_{x+\frac{1}{2}}$. It will be remembered that the ratio did not yield the value of this quantity even when only one of the two disturbing influences was present. To make the above ratio yield the value of ${}_{1}p_{x+\frac{1}{2}}$ we shall have to isolate the disturbance caused to the uniform flow of population from year to year by irregular variation in births from the disturbance caused by irregular variation in deaths and multiply the above ratio by suitable factors which, in addition to being a complicated process, assumes accurate knowledge of vital occurrences, records of which are extremely defective with respect to the population we are dealing with.

Migration.

*18. The correction for disturbances caused to the censused population due to immigration and emigration is easy to allow for if statistics of the immigrant and emigrant population have been maintained according to age.

*19. If I_x and E_x be the number of immigrants and emigrants respectively at age x during the intercensal period and if out of the excess of immigrants over emigrants there have occurred D_x deaths in the period, we shall have to take for the population at age $x+10$ at the latter of the two Censuses $P^{(10)}_{x+10}$—(I-E-D) instead of $P^{(10)}_{x+10}$ in each of the ratios given above yielding probabilities of surviving 10 years.

*20. The disturbance due to migration except in the cases of a few Indian Provinces is not very material. Further, Migration Statistics are not available according to age. The Actuary has, therefore, to make as good an estimate as possible of the age distribution of the migrant population. The deaths amongst the net immigrant population though comparatively of small significance will have to be allowed for by him in each age group by using his best judgment.

*21. I think a few words at summarising the results arrived at so far will, in view of the help it may give at clarifying the point under consideration, not be considered redundant. For the sake of simplicity I shall assume either that disturbances due to migration do not exist at all or if they do, appropriate corrections have been made to the censused population to eliminate as far as possible errors due to them. If correct ages are returned at the Census we shall obtain the following results :—

I. On the supposition that the population has been absolutely stationary for a long period so that the number of births in a year is equal to the number of

deaths we shall have $\frac{P^{(10)}_{x+1}}{P^{(1)}_x} = \frac{P^{(2)}_{x+1}}{P^{(1)}_x} = \frac{P^{(1)}_{x+1}}{P^{(1)}_x} = \frac{P^{M}_{x+1}}{P^{M}_x} = {}_1p_{x+\frac{1}{2}}$.

II. If the variation in the populations returned from Census to Census be due solely to variation in birth rate the ratio $\frac{P^{M}_{x+1}}{P^{M}_x}$ will have to be multiplied by a factor r as explained above which will have the effect of eliminating irregularity due to varying flow of birth rate from year to year and make the product $r\frac{P^{M}_{x+1}}{P^{M}_x}$ yield the value of ${}_1p_{x+\frac{1}{2}}$ which we require for the construction of the mortality Table.

III. Similarly when the population has been subject to varying death rate only, we shall have to multiply $\frac{P^{M}_{x+1}}{P^{M}_x}$ by a quantity r^1 (explained above) to make the product equal to ${}_1p_{x+\frac{1}{2}}$.

IV. When the population has been subject to irregular variation in both births and deaths we shall have to multiply by two different factors r and r^1 the ratio $\frac{P^{M}_{x+1}}{P^{M}_x}$ to make the product equal to ${}_1p_{x+\frac{1}{2}}$. The factor r eliminates variation due to the irregular flow of births and is obtained by an analysis of the records of births maintained for a long period in the past and the factor r^1 eliminates variation due to irregular incidence of rates of death from birth to age x and is obtained by an analysis of the records of deaths. In all the four cases $P^{(10)}_{x+10}/P^{(1)}_x = {}_{10}p_{x+\frac{1}{2}}$ from which the values of ${}_1p_{x+\frac{1}{2}}$ can be obtained by interpolation.

*22. These methods are available if, and only if, both the desiderata given below hold:

(1) that the ages returned at the Census are absolutely correct, and

(2) that accurate records of births and deaths, the latter according to correct ages, have been maintained in the past.

*23. Since the ages returned at the Indian Censuses (including the latest one) have been manifestly full of errors both of a major and minor nature, added to which is the proverbial inaccuracy of the records of Vital Statistics maintained by the Provinces, we shall have to adopt special methods and construct mortality Tables by using Census enumerations alone. The fact that the Census enumerations are full of errors rules out the method of decennial interpolation from the equality $P^{(10)}_{x+10}/P^{(1)}_x = {}_{10}p_{x+\frac{1}{2}}$. The fact that the records of Vital Statistics are not maintained accurately makes it impossible to find out the factors r and r^1 (mentioned above) representing correcting factors for the irregular incidences of births and deaths.

*24. The question will naturally be asked as to what is the method to be adopted which will minimise the effect of the errors in the Census material and provide mortality rates on which reasonable reliance can be placed. The answer is naturally suggested by the equation $P^{(10)}_{x+10}/P^{(1)}_x = {}_{10}p_{x+\frac{1}{2}}$ when Census operations are undertaken once in 10 years or by the equation $P^{(2)}_{x+1}/P^{(1)}_x = {}_1p_{x+\frac{1}{2}}$ when Censuses are taken annually. Taking the former of the two equalities it will be seen that if the numbers at each age returned at the two Censuses could be successfully graduated so as to remove errors we shall obtain the value of ${}_{10}p_{x+\frac{1}{2}}$ at each age. The disadvantage of this method is due to the fact that methods of graduation are not entirely successful in removing major deliberate errors. Since the values of ${}_{10}p_{x+\frac{1}{2}}$ are to be obtained from two sets of numbers $P^{(10)}$ and $P^{(1)}$ independently graduated and having residual errors in themselves, the errors in the computed values of ${}_{10}p_{x+\frac{1}{2}}$ will be accentuated or masked according as the residual errors in $P^{(10)}$ and $P^{(1)}$ are in opposite or in the same direction with the natural result that small errors in the graduated values of $P^{(10)}$ and $P^{(1)}$ may be magnified in the computed values of ${}_{10}p_{x+\frac{1}{2}}$. With such errors magnified in them these values will not give as accurate a measure as desirable of the manner in which the number $P^{(1)}_x$ at the first

Census diminished to P^{10}_{x+10} at the next decennial Census due to the operation of mortality.

*25. The only other method that would to a large extent minimise this error is suggested by the equality $(r\,r^1)\,P^M_{x+1}/P^M_x = {}_1p_{x+\frac{1}{2}}$. According to this method we graduate the mean population of the intercensal period and by comparing the two Census enumerations in suitable age groups obtain and graduate the rates of natural increase of the population which will provide smooth values of r_x the rate of natural increase or decrease of the population at each age x in the decennium due to the combined operation of varying incidences in the birth and death rates. By multiplying the graduated mean population at each age x, P^M_x, by $r_x^{-\frac{1}{20}}$ and $r_x^{\frac{1}{20}}$ respectively we obtain the respective number of people that would have been returned at each age had two Censuses been taken, one on a date six months anterior and the other six months posterior to the middle day of the decennial period. By this device, from the figures of two Censuses taken with an interval of 10 years between them, we obtain the figures of two Censuses with only one year separating them. The values of ${}_1p_{x+\frac{1}{2}}$ at each half age are then obtained from the equality $r^{\frac{1}{20}}_{x+1}\,P^M_{x+1}/r_x^{-\frac{1}{20}}\,P^M_x = {}_1p_{x+\frac{1}{2}}$. This is the method that has been adopted in the construction of the mortality Tables for all the Provinces.

26. No apology, I hope, is needed for this lengthy description of the peculiar methods to be adopted in constructing mortality Tables from Indian Census Returns without which, I am sure, those for whose benefit Census publications are usually meant will find it difficult to appreciate why for instance the mean population should be calculated or, as a matter for that, what has the rate of increase in the population to do with the rate of death. The average man of letters is afraid of anything in the nature of statistics on the ground that "it is all dull stuff". It might take several years before the average reader realizes that statistics are nothing but numerical expression of facts a knowledge of which is essential to enable one to be prepared for difficulties which might occcur. They are more inclined to swear at statistics whereas they should swear by them. It will therefore be necessary, in the language of my esteemed friend, Mr. S. V. Mukherjea, Census Commissioner for Baroda, "to humanise the document". Talking of the general apathy of the public towards Census publications, Mr. Mukherjea in his characteristic style writes: "My experience has been that a Census Report, although intended for the general benefit of students and officers, is rarely read. Officers and publicists like to get a complimentary copy—for it is the thing to do so—look at its opening pages and then relegate it to their shelves, resorting to it most occasionally as an inducement to sleep when all other "drowsy syrup" of the doctors failed. What destiny is reserved for these humble pages, their author will be the last person to know".

27. If this is the language in which Mr. Mukherjea deplores the lack of interest of the public to a Census Report, my lot has been cast with a drier subject and the lengthy description given above is an humble attempt to "humanise my document".

SECTION III.

Errors in age.

1. The huge magnitude and the very wide range of the errors in the ages returned at the Indian Censuses constitute another important contributing factor towards making the task of the investigating Actuary particularly difficult. So much has been said in the past by successive Census Commissioners and Census Superintendents of each Province and State of the errors that abound in the ages returned at the Indian Census that any lengthy description by me of the psychological factors that lie at the root of these errors would be to emphasise the obvious. A large part of the Actuarial Report in connection with the 1921 Census is devoted to a consideration of the question of errors in age.

2. Before I consider the actual nature and extent of the errors in age one special characteristic of vital importance more or less peculiar to Indian Census has to be mentioned, namely, that people have no clear notions as to the distinction between age last birthday and age next birthday and always mix up the two. This was proved beyond doubt by my predecessor by reference to the 1891 and the 1901 Censuses of the Punjab. Curiously enough, in the former of the two Censuses,

the people of that Province were asked to state their age next birthday whereas in other Provinces the age asked for was the age last birthday. In the subsequent Census, however, the age asked for in the Punjab as well as in the rest of India was age last birthday. In the former of the two Censuses, to bring the Punjab figures in conformity with the figures for the rest of India, conversion was effected from age next birthday to age last birthday by scheduling the number returned at each age opposite the next younger age.

3. A part of the full Table appearing on page 7 of Mr. Meikle's Report on the "Age Distribution and Rates of Mortality" relating to the two Censuses of the Punjab is given below.

TABLE III.

Numbers recorded at each age in 1891 and 1901 out of 100,000 persons in the Punjab.

Age.	1891.		1901.	
	Males.	Females.	Males.	Females.
27—28	1,491	1,500	801	656
28—29	348	400	1,665	1,661
29—30	5,511	6,180	373	374
30—31	219	148	5,257	6,039
31—32	1,830	1,567	200	148
32—33	465	281	1,971	1,748

It will be seen that the large number 5,511 appearing in column 1 was the total population out of 100,000 males returned at age 30 next birthday and is, therefore, scheduled opposite to age 29 last birthday. This number 29 is really a very unpopular one as is evident from the small number 373 returned at that age last birthday at the 1901 Census. Successive Censuses have revealed that numbers, relatively large as compared to the adjoining ages, have been returned at ages ending with 2 and 8.* This is evident from the comparatively large numbers entered opposite age periods 27-28 and 31-32 in the 1891 Census as these were returned for ages 28 and 32 next birthday respectively. In the subsequent Census, however, numbers more or less equally large were returned for ages 28 and 32 last birthday respectively. A study of the full Table to which reference has been made will show that this characteristic is repeated round about all ages which end in 0 or 5. It is, therefore, evident that people fixed their attention only on the number indicating the age to be returned and were not influenced in the least by the age asked for being either the age last birthday or next birthday. Mr. Meikle states that it may, therefore, be assumed that the ages returned are the nearest birthday. What, however, appears to me to be the reasonable conclusion to draw is that the numbers returned at each age would have been the same whether ages next birthday or last birthday or nearest birthday had been asked for. A confusion similar to the one between age last birthday and age next birthday in India affected also the returns as to duration of marriage asked for in the 1911 Census of the United Kingdom as was pointed out by Sir Alfred Watson in the discussion on a Paper submitted by Dr. Stevenson on the "Fertility of the various Social Classes" to the Royal Statistical Society in April 1920.

4. The change made in the 1931 Census of recording age nearest birthday instead of last birthday appears to be one in the right direction on the primary ground that the greater care and thought necessary in giving an age to the nearest birthday taking into account the number of completed months after the last integral age, are more conducive to correct ages being returned when age nearest birthday is asked for than when age last birthday or next birthday is asked for. This appears to have been the main idea at the back of the mind of the Census Joint Committee in the United Kingdom when at the Census of 1921, for the first time, ages were required to be given in years and months though the change was made not with the intention of tabulating ages in years and months.

5. Taking up now the actual errors in the statement of ages at the Census it is said that an investigation into these errors is a study in idiosyncrasy. It would, however, give some consolation if it could be proved that each succeeding Census

* Whether the two digits are really centres of attraction or repulsion is a matter that requires detailed examination and is dealt with lower in this section.

showed that idiosyncrasy was slowly yielding place to sanity. It was, however, impossible for me to make any investigation in this direction with the 1931 Census Returns as by the time Government announced their intention to have the Actuarial Report in connection with this Census written by me the only available statistics were the ternary and septenary groups into which the individual Age Returns were straightaway sorted. Whether the ternary and septenary groupings could be modified so as to secure a more accurate balance of errors in each group is a subject which I shall take up under the head of "Grouping" in this section, but I cannot help observing here at the risk of repeating it that it will be undesirable to make the Census Analysis forego the demographic and psychological study which the distribution at each age out of a representative and random sample of 100,000 persons of each sex in each Province provides.

6. The principal sources of error in Census Statistics are of two kinds, namely, (*a*) Minor Errors of short range, unbiassed in character, and (*b*) Major Errors of a biassed nature and wide range that produce considerable distortion of the age curve.

7. *Minor Errors.*—The minor errors are attributable mainly to ignorance. Many people, in a country predominantly illiterate, are so indifferent as regards their age that, when questioned by the enumerator, they return round numbers which are primarily the nearest decennial ages and secondarily the nearest quinquennial ages. These errors are cyclical in character affecting ages which are multiples of 10 and 5 and recur, therefore, in cycles of ten-year age periods.

8. It has been held, by an examination of the relatively large numbers returned at ages ending in 2 and 8 as compared with the respective adjoining ages, that these digits are minor centres of attraction, meaning thereby that the numbers returned at these ages are more than the correct numbers at them. It is true that the preference for age 12 is so marked as to throw in the shade the general preference for a multiple of 5 in the age period 10-20 and 8 is very often preferred to age 5 in the period 0-10. A reference to the row "Deviation" in Tables IX, X and XI will show that, beyond the partiality above indicated, preferences for ages ending in 2 and 8 are not so very pronounced in the other sections of the decennial age periods. As a matter of fact, in most provinces, except Bengal, 8 is a centre of repulsion* to a certain extent. All the other digits are repulsed in the order 6, 4, 7, 3, 9 and 1 as is evident from the results of the three Census Returns analysed in Tables IX, X and XI above referred to. The method of construction of these Tables, the conclusions to be drawn from a study of them regarding the magnitude of the attraction or repulsion for ages ending in the several digits from 0 to 9 and the order in which the various digits have been preferred are taken up in greater detail in a few paragraphs of this section occurring later. These minor mis-statements of age are removed by a good method of graduation and disappear if the population is grouped in suitable decennial age periods.

9. *Major Errors.*—The major errors, that affect population statistics producing serious distortion of the age curve and of the rates of mortality deduced therefrom, consist primarily of the transfer of persons from one age period to another and secondarily of substantial omissions in the Census Records especially in ages of infancy and childhood.

10. If accurate records of deaths and migration are maintained according to each age it might be possible to identify the magnitude and locate the position of these major errors to a certain degree of accuracy, by comparing the number returned at any age, say, x at one Census with that returned at age $x+10$ at the next decennial Census by making suitable allowance for deaths and disturbances due to migration to which the first number had been subject in the intercensal period. It is hardly necessary to add that such an investigation is nextto impossible with the present condition of death and migration records in India. These wilful mis-statements are generally due tovanity especially in the case of old persons who generally give themselves the advantage of a few more years. There might also be financial reasons for overstatement at the old ages if the laws of the country provide for an old age pension. In a certain number of cases these mis-statements are also due to resentment against the personal nature of the questions

* A digit is a centre of repulsion when the number returned as of that digit is less than the correct number at it.

and suspicion of their motives. Whatever may be the causes for these deliberate mis-statements they are ultimately traceable to ignorance; not ignorance of age itself to which the minor errors are due but to ignorance of the fact that the Census Analysis does not deal with individuals but only with groups and the individuals are merged unidentifiably in the groups dealt with.

11. At the appropriate place in this section comparisons will be effected between the extent and magnitude of the errors in age in India and those of some other countries where the level of education is decidedly higher than in India. The errors in the ages returned at the Censuses in India do not show any tendency to diminish and will not do so, so long as illiteracy permeates the population to the extent it is now doing. We cannot expect better results till education spreads and as a natural result the ignorance of the people in matters relating to the Census is substantially minimised. Talking of this ignorance Mr. G. H. Knibbs in a Paper read before the Royal Statistical Society in 1920 said :—

> "It would be easy to publish primers showing the purpose of a Census or of the greater branches of Statistics. Such primers could readily be prepared so as to be supplied to primary and other schools—in such a form as to serve the purpose of a systematic and most useful instruction in Statistical Method—instruction which would be of business value. In this way a popular recognition of the utility of Statistics could readily be created and the work of securing accurate data greatly facilitated."

12. One would entirely agree with Mr. Knibbs' view that education relating to statistical enquiries of all kinds, which, to make them serve their high purpose, should be presented in an interesting form devoid of all dull series of numerical Tables, should form a compulsory part of the education, in his boyhood, of the future citizen. This will to a large extent mend the no more than a *dilettante* interest shown even by a person of more than average education in matters relating to the Census.

On the Nature and Extent of the Errors in Age in Census Returns.

13. In his Actuarial Report in connection with the 1911 Census the late Mr. T. G. Ackland illustrated the preference for particular digits of age by the following Table :—

TABLE IV.

Showing in each of the six Provinces undermentioned the numbers out of a total of 1,000 returned in respect of each digit of age ; also the mean values for the six Provinces and the order in which the several digits were recorded.

	DIGIT OF AGE RECORDED IN CENSUS									
	0	1	2	3	4	5	6	7	8	9
Numbers (per 1,000) recorded in respect of each digit of age										
Bengal	253	43	121	56	64	187	76	57	106	37
	(1)	(9)	(3)	(8)	(6)	(2)	(5)	(7)	(4)	(10)
Bombay	292	43	110	56	60	215	66	47	78	33
	(1)	(9)	(3)	(7)	(6)	(2)	(5)	(8)	(4)	(10)
Burma	187	76	106	98	78	142	85	80	84	64
	(1)	(9)	(3)	(4)	(8)	(2)	(5)	(7)	(6)	(10)
Madras	264	48	113	64	73	171	89	48	90	40
	(1)	(9)	(3)	(7)	(6)	(2)	(5)	(8)	(4)	(10)
Punjab	279	44	110	55	67	198	78	49	84	36
	(1)	(9)	(3)	(7)	(6)	(2)	(5)	(8)	(4)	(10)
United Provinces	294	47	113	45	65	186	83	43	91	33
	(1)	(7)	(3)	(8)	(6)	(2)	(5)	(9)	(4)	(10)
Totals ..	1,569	301	673	374	407	1,099	477	324	533	243
Mean values	262	50	112	62	68	183	79	54	89	41
Order of Record	(1)	(9)	(3)	(7)	(6)	(2)	(5)	(8)	(4)	(10)

14. This Table was intended to show not only the magnitude of concentration at ages ending in certain favourite digits but also the order in which the digits were preferred. Mr. Ackland drew his conclusions on the assumption that had correct ages been returned the number with respect to each digit shown in the Table would have been 100 being a tenth of the total population which was reduced to 1000 for the purpose of this enquiry. In his Actuarial Report with the 1921 Census, Mr. Meikle did not publish any figures based on a similar analysis of the

1921 Census material but evidently indicated his acquiescence with the arguments and conclusions of Mr. Ackland by quoting the order of preference for each particular digit as deduced by the latter for the whole of India.

15. There is however some fallacy in this method. The count evidently commences at age 0 and a cycle is complete at age 9. At age 10 another cycle commences which is completed at age 19 and so on. Each age, therefore, ending with the digit, say, 9 is nine years lower down the scale than age 0 of the same cycle and has therefore been depleted by deaths occurring in these nine years of lifetime. Had there been no preference for particular digits of age, that is, if people had returned their correct ages, even then the total number returned at ages having 9 in the unit's place would have been considerably smaller than the number returned at ages ending in 0. There would have been a progressive and smooth diminution as we go downwards from age 0 to age 9. The method of analysis adopted at the 1911 Report does not make allowance for this progressive diminution due to mortality and therefore loads the scales against ages at the lower half of the cycle in favour of those at the upper half.

16. In illustration of the case in point, I have taken Mr. Ackland's graduation of the specimen schedule of 100,000 males of the Province of Bombay. The graduated numbers are smooth and do not exhibit any preference for any particular digit of age but only diminish smoothly from age to age due to the operation of mortality. The results are set out in the following Table :—

TABLE V.

Distribution of 100,000 Males of the Province of Bombay according to the digit of age in the unit's place.

1911 Census.

	Unit figure in age last birthday.									
	0	1	2	3	4	5	6	7	8	9
A. ..	12,225	11,400	10,845	10,382	9,987	9,638	9,318	9,017	8,732	8,456
B. ..	1·45	1·35	1·28	1·23	1·18	1·14	1·10	1·07	1·03	1·00

17. In the row A the graduated numbers are given while row B shows the ratio which the number at each digit bears to that at digit 9. The latter figures indicate that, without showing any preference for ages ending in particular digits, the total population returned at ages ending in 0 should be 45%, those at ages ending in 1, 35%, at 2, 28%, etc., in excess of those returned at ages ending in 9. Hence, before conclusions are drawn, allowance should be made for this natural excess at all other digits as compared with the number at digit 9.

18. A method that eliminates this fallacy is to obtain for each digit the ratio of the sum of the ungraduated to that of the graduated numbers at that digit and compare these ratios. It is not claimed that the graduated numbers represent absolute truth. A good method of graduation would produce figures which deviate, if at all, from the true figures within the limits of errors due to random sampling. It can, therefore, be claimed that, where the original statistics are manifestly full of errors, the graduated figures represent as near an approach to the true figures as possible; the greater the reliability of the original statistics the closer will be the graduated to the true figures.

19. The three Tables IX, X and XI appearing on pages 128-130 show for the six main Provinces of India in each of the three Censuses (1911, 1901 and 1891) the numbers returned in respect of each digit of age out of a total male population of 1,000 in each Province, the corresponding graduated numbers and the ratios of the ungraduated to the graduated total for each digit. The deviations (excess+, deficiency—) of the ungraduated from the graduated numbers are given in the next row and the row following shows the order in which the different digits have been preferred while returning ages obtained by a comparison of the ratio of the ungraduated to the graduated numbers. The last row gives the rank allotted to each digit by the method adopted at the 1911 Analysis by a comparison of the size of the ungraduated numbers only without making any allowance for their progressive diminution due to the operation of mortality as explained above. I could not carry this enquiry down to the 1931 Census as with that Census, with which my work is intimately connected, no returns at individual ages either of the

whole population or of samples, as I have several times said in this Report, are available, while with respect to the 1921 Census, though the numbers at individual ages of specimens are available, the graduated numbers are available only in groups.

20. It should be observed at the outset, at the risk of repeating it, that digits should be allotted their rank in the order of record only by a comparison of the ratio of the ungraduated to the graduated numbers and not by a comparison of the magnitude of the absolute numbers representing deviation. In illustration of this point, we can take the digits 1 and 9 for the United Provinces at the 1911 Census. The ratio for the former digit is ·4196 and for the latter ·3837 which shows that out of every 10,000 males whose ages had 1 in the unit's place only 4196 returned correct ages and the remaining 5804 other ages. As for the digit 9 the ratio shows that only 3837 out of 10,000 whose ages ended with 9 returned correct ages. It is now evident that, as between the two digits, ages ending with digit 9 were repelled by the U. P. males in 1911 more than ages ending with digit 1. If we had drawn our conclusions from the relative magnitude of the deviation for each digit we would have inferred that 9 was more popular than 1 in that Province. The deviations have their own use in giving a numerical measure of the magnitude of the error at each digit out of each sample of 1,000 of the population having the same age distribution as the total population. For instance, in such a sample of 1,000 persons in the United Provinces in 1911, as many as 112 persons would have been found at ages ending in the digit 1 of which only 47 returned correct ages and the remaining 65 returned incorrect ages. The ratio of 65 to 112 is smaller than the ratio of 53 to 86 showing that the unpopularity of 1 in U. P. at the 1911 Census was less than that of 9 though the absolute figures of deviations for these digits are 65 and 53 respectively. The "total deviation irrespective of sign" gives the total number of males out of each representative sample of 1,000 persons that returned incorrect ages.

21. It will be seen, from a scrutiny of the figures in Tables IX, X and XI, that ages ending with the digits 0, 5 and 2 proved centres of attraction. Confining first our attention to the figures relating to All-India in Table IX, it will be seen that as many as 141 per mille of the total population whose ages did not end with the digit 0 returned ages ending with that digit at the 1911 Census. This is the average figure for the whole of India and varies from a maximum of 175 in the United Provinces to a minimum of 68 in Burma. The magnitude of the plumpings at ages 0 in the other Censuses can be obtained similarly from the figures for these Censuses appearing in Tables X and XI. The next popular digit is 5 though in the age period 10-19 age 12 has a greater degree of concentration than age 15. Next in rank in the order of preference comes the digit 2, followed by 8. From an examination of the All-India ratios for these two digits in all the three Censuses, it will be seen that the numbers returned at these ages are very nearly accurate. The former is the centre of a small attraction though it has been consistently repelled by Burma, and by Madras in two out of the three Censuses analysed. The latter is, if anything, a small centre of repulsion. In the 1891 and 1901 Censuses 1 per mille and 5 per mille respectively of the total population who were of an age ending with digit 8 repelled their true ages and returned other ages. At the 1911 Census, however, 1 per mille of the total population whose age did not end with the digit 8 returned an age ending with that digit. Bengal alone, of all the Provinces, appears to have consistently shown a great partiality for these two digits. I feel it essential to emphasise the fact that the errors at ages ending in digits 2 and 8 are not very material, except at the single age 12 and the single age 8, as it appears to me that it has been assumed in the past that at ages ending in these two digits there has been a substantial overstatement of numbers.

22. The other digits are definite centres of repulsion as in every one of them the actual numbers returned are less, in some considerably less, than the expected or graduated numbers. The same fact is confirmed by the ratios applicable to these digits either for the Provinces or for the whole of India as these ratios are in every case substantially less than unity, which, by the way, would have been the value of the ratio for any digit had correct numbers been returned at that digit.

23. What might, however, prove of interest is the fact that the unpopularity of digits 6, 7, 8 and 9 appearing in the lower half of the cycle has been accentuated and that of digits 1, 3 and 4 in the upper half masked by the method of comparison

adopted at the 1911 Report which omitted to make allowance for the influence of mortality above referred to. For a similar reason the popularity of ages ending in 0 has been further magnified and that of ages ending in 5 not fully brought out by the inherent fault in the old method which compared the several digits as regards their popularity by the absolute magnitude of the crude figures returned at the Census. To take an example, it would appear, by paying attention only to the numbers returned at the Census, that in the Province of Bengal at the 1911 Census as many as 153 per mille of the total population who were not of ages ending with 0 returned such ages whereas the correct number as given by "Deviation" should be only 129. The ungraduated figure for digit 5 would indicate that the cluster round ages ending in 5 was only 87 per mille whereas the correct number is larger being 91. This method of basing conclusions from the magnitude of the crude figures only returned at the Census without allowing for the fall in numbers due to mortality from age to age did perhaps the greatest injustice to digit 5 as against digit 0 at the 1901 Census in the two Provinces of Bombay and Madras. I am not aware if it had been realised that in these two Provinces at the 1901 Census the cluster round ages ending in 5 was proportionately larger than that round ages ending in digit 0. The ratios (which alone give the correct method of assessing the popularity of different digits) relating to these digits show that in the Province of Bombay at the 1901 Census the numbers returned at ages ending in 5 were 208 per cent. of the correct number whereas for digit 0 they were only 192 per cent. The corresponding percentages for Madras were 142 and 141. Since the absolute magnitude of the numbers returned at 0 is considerably larger than that at 5 it is very likely that the fact, that at the 1901 Census in the Provinces of Bombay and Madras, ages ending in digit 5 were more popular than ages ending in digit 0, thereby reversing the usual order of preference of these two digits, was overlooked.

24. The method of comparing ungraduated Census figures has also reversed the relative positions of digits 1 and 9 and the latter has come in for a measure of unpopularity rather undeserved. It will be seen from a reference to Table IV that digit 9 has been given the last rank in the order of record for all the Provinces and naturally for the whole of India and digit 1 the next higher rank in almost all Provinces and for the whole of India, while in the United Provinces this digit was given as high a rank as the 7th. It will, however, appear from a comparison of the sizes of the ratios that at the 1911 Census in all the Provinces and in the whole of India 9 was more popular than 1 except in the United Provinces where the order was reversed. A reference to all the three Tables IX, X and XI will show that except in two instances (1901 Burma, and 1911 U. P.) digit 9 always secured the 9th rank and 1 the last, *viz.*, 10th rank, thereby proving clearly the greater popularity of ages ending in digit 9 as compared with ages ending in digit 1. The other incorrect ranks allotted by the old method are all indicated in Table IX.

25. Exigencies of space and time forbid my making any further elaboration on this subject relating to the order in which ages ending in the different digits were preferred at the three Censuses that have been analysed for this study. It is, however, necessary to state in closing this topic that the other odd numbers excluding 5 were preferred in the order 3, 7, 9 and 1 and not in the order 3, 7, 1 and 9, as made out in the older Reports. As between digits 3 and 7 it is not quite decisive which of the two is the more popular. Each is repelled practically to the same extent as is evident by the extreme closeness of the ratios relating to these two digits in all the three Censuses for the whole of India.

26. As regards how far these errors show a tendency to diminish, I fear, I am not in a position to make any statement that would show a satisfactory state of things. Information in this respect is given by the numbers called "total deviation irrespective of sign" in Tables IX, X and XI. For the whole of India about 522 per mille of the male population returned incorrect ages at the 1891 Census which happily dwindled down to 376 at the 1901 Census but at the 1911 Census the number rose again to 466. If we examine particular digits the same tendency is revealed. For instance, the concentration at age 0 at the 1891 Census was 166 per mille which diminished to 108 at the 1901 Census and again rose to 141 in 1911. It will be found that in the case of all Provinces except Burma there has been a set-back in this respect from the 1901 to the 1911 Census. It is not possible to say how far Burma has been consistent

in the tendency for improvement it has shown, as this Province, for reasons explained by Sir George Hardy, was not included in the 1891 Actuarial Analysis. Madras which showed a very large deviation of 562 at the 1891 Census was remarkably accurate at the 1901 Census, for, at that Census only 180 per mille of the total male population gave incorrect ages. At the 1901 Census the accuracy shown by Madras was substantially superior to that of all the other Provinces including Burma. But it has since taken fast strides in the retrograde direction as will be evident from the large number, 450 per mille, that returned incorrect ages at the 1911 Census. This figure, though significantly smaller than the figures of the other Provinces excluding Burma, is almost double that of Burma and shows Madras as exactly two and a half times worse off in this respect as judged by the standard set up by Madras itself at the 1901 Census. It is not, I hope, necessary to make further comments as the figures of 'ratios', 'deviation' and 'total deviation irrespective of sign' tell their own tale. The general conclusion to be drawn from a scrutiny of these figures is that the tendency towards improvement shown by all the Provinces from 1891 to 1901 practically vanished in 1911, Burma alone being an exception. What has happened since 1911 I am not in a position to pronounce any opinion upon backed by Statistical Analysis, as, for reasons I have already explained more than once, it has not been possible for me to make any investigations in this direction with the 1921 and 1931 Census materials.

27. It has often been held, not without justification, that the magnitude of these errors is directly correlated with the percentage of illiteracy in a country. It might, therefore, be instructive to compare in this respect India with some representative countries of the world. An easy method of comparison is obtained by using the "Index of Concentration" devised by the United States Census Bureau. By this method the number of persons between 23 and 62 years whose ages are returned as multiples of 5 is compared with one-fifth of the total number between the two ages. The method is based on the justifiable assumption that had there been no concentration on multiples of 5 these two figures would be "about equal". The limits 23 and 62 were selected as they covered the period in which the concentration under investigation was most marked. The method suffers, to a certain extent, from the same disadvantage as attaches to that adopted at the 1911 Actuarial Analysis in proving the order of preference for particular digits of age. Since, however, numbers ending in 5 and 0 are symmetrically placed in each cycle that commences with 3 and ends with 2, any bias in favour of 5 introduced by the method is neutralized by the bias contrariwise against 0. Again, since the small error yet attaching to the method affects more or less equally all the countries, comparison of one country with another is not vitiated by this method. The following Table effects such a comparison in which the total for multiples of 5 is expressed as a percentage of the total for all ages from 23 to 62 and is taken from the 1921 Report for the Province of Bombay by Mr. Sedgwick. It should, however, be stated that 100 would mean no concentration at all and 500, the maximum value of the index, would mean that all ages returned between 23 and 62 were multiples of 5.

TABLE VI.

Region.	*Index of concentration.*
Bombay—Males. Selected area 1	325
Bombay—Males. Selected area 2	314
Bulgaria	245
Russia	182
Hungary	133
United States	120
Canada	110
France	106
Germany	102
Sweden	101
England and Wales	100
Belgium	100

28. Another method of indicating the tendencies of people to concentrate at ages ending in certain digits and avoid others is to find the ratio of the total number returned at ages ending in particular digits to the corresponding graduated total which was also explained earlier in this section. The following Table, compiled by Mr. G. H. Knibbs, gives for males and females of Australia the ratio described above for the three Censuses taken in 1891, 1901 and 1911.

TABLE VII.

Ratio of number recorded to adjusted number. Censuses—1891, 1901 and 1911—Australia.

Year of Census.	Unit figure in age last birth-day.									
	0	1	2	3	4	5	6	7	8	9
					MALES.					
1891 ..	1·1388	·9167	1·0088	·9545	·9969	1·0366	1·0207	·9513	1·0055	·9532
1901 ..	1·1044	·9369	1·0072	·9677	·9809	1·0343	1·0134	·9636	1·0144	·9667
1911 ..	1·0485	·9956	·9944	·9787	·9990	1·0085	1·0097	·9691	1·0191	·9695
					FEMALES.					
1891 ..	1·1251	·9288	·9978	·9848	·9943	1·0077	1·0117	·9640	1·0125	·9558
1901 ..	1·0926	·9270	1·0039	·9861	·9979	1·0106	1·0128	·9708	1·0165	·9738
1911 ..	1·0367	·9895	·9935	·9895	1·0056	1·0050	1·0066	·9770	1·0148	·9760

A Table similar to the above, with respect to the male population only of the whole of India for the same three Censuses, is given below :—

TABLE VIII.

Ratio of number recorded to adjusted number. Censuses—1891, 1901, and 1911—All-India—Males.

Year of Census.	Unit figure in age last birthday.									
	0	1	2	3	4	5	6	7	8	9
1891 ..	2·3719	·3596	1·0556	·5481	·6800	1·9175	·8065	·5444	·9773	·4471
1901 ..	1·8925	·5575	1·0556	·6923	·7600	1·7708	·8298	·7143	·9432	·5882
1911 ..	2·1652	·4425	1·0370	·5962	·6800	1·8865	·8404	·6000	1·0114	·4824

29. It need hardly be stated that unity for any digit would mean that ages ending in that digit have been correctly returned. A cursory scrutiny of the above Tables will make it evident how very slight the bunchings are in Australia at ages ending in 0 and 5 as compared with the pronounced cluster round these ages in India. The same characteristic might also be noted at ages which are centres of repulsion. The chief reason why these Tables are given here is to show that, whereas in Australia there is a pronounced tendency for the ratios relating to each digit to approach unity, that is, for the errors in age, already very small, to show a definite tendency towards diminution, no such tendency is exhibited by the figures relating to India. I have only to repeat what I have already observed that though 1901 Census figures showed some improvement on those of 1891, the figures relating to the 1911 Census indicated a definite move in the retrograde direction as is also evident from Table VIII.

Grouping.

30. Germane to the subject of errors in age is that of the groupings to be adopted to minimise the effect of the accidental errors that affect Age Returns. This is, however, a topic on which opinion is divided and whether one partciular method or another is to be preferred will depend on the certainty with which it will be possible to say how far the statistics collected are afflicted with errors of overstatement or understatement and whether the range of these errors is short or long. The central idea underlying all methods of grouping is that groups should be formed as far as possible containing the popular age along with the adjoining ages from which the former has drawn numbers so that, though returns at individual ages may be incorrect, the total of the group may be considered reasonably correct and the group totals are used as the basic data for any subsequent investigations. The most satisfactory grouping is that which makes the deviations between the total in each group and the ideal total in that group that would have been evident had correct

ages been returned a minimum. We are then faced with the problem of giving due weight to the rival claims of two considerations each acting contrary to the other. With the view to minimise the errors left over in them it is desirable to form large groups ; on the other hand, large groups may have the effect of obscuring peculiar conditions prevailing in the decennium affecting only short range or ranges in the age curve.

31. Had the plumpings been confined only to ages ending in 0, groups 5-14, 15-24, etc., would deal effectively with such errors on the assumption that the concentration at ages ending in 0 is only drawn from the adjoining four or five ages on either side. The records of deaths of England and Wales were presented in this form for many years. Since, however, ages ending in 5 are also secondary centres of disturbance, the decennial groups above referred to will have to be abandoned in favour of quinquennial groups. Had there been concentrations of equal intensity at ages 0 and 5, groups 3-7, 8-12, etc., wherein the digit of concentration occupies the central position in each group would have been satisfactory. Indian Census Returns have, however, indicated concentration of greater intensity at all decennial ages than at quinquennial ones. This is the main point of criticism against this method added to which is the fact that ages ending in 2 which are also favoured to a certain extent occur at the end of alternate groups. In what follows this will be referred to as the 3-7 group. Had the concentrations at the two favourite digits been due to systematic over-statements of ages only, groups 1-5, 6-10, etc., would have eliminated them. Similarly groups 0-4, 5-9, etc., would have satisfactorily dealt with understatements. Except, however, at particular short periods of life there is no reason why systematic over-statement or under-statement alone should affect the Age Returns. The former method (0-4 group) had been adopted in the past as the standard one for grouping and presenting Census figures. This was condemned by my predecessor, Mr. Meikle, as the least accurate of all the methods of grouping and I find myself in entire agreement with his condemnation of the method as I shall show lower down in the course of this enquiry. I should also make special mention here of the great service rendered by Mr. Meikle to the cause of Indian Census by focussing attention on this important subject of grouping. The recommendations made by him, though in my opinion could be improved upon, were decidedly in the nature of improvements on the old methods. There are two more groupings, namely, 2-6, 7-11, etc., and 4-8, 9-13, etc. Five different methods of grouping have altogether been mentioned respectively designated as 0-4, 1-5, 2-6, 3-7 and 4-8 groups. We can also call 0-4 grouping as the 1st place method designating the method of grouping by the position of the most popular age of the group relative to it. For a similar reason 4-8 group will be called 2nd place method and 3-7, 2-6 and 1-5 will respectively be called 3rd, 4th and 5th place methods. Each of these methods of grouping could be associated with either age last birthday, next birthday or nearest birthday thereby giving rise to 15 different methods. In India, however, since people do not make any distinction in returning ages between age last birthday, next birthday or nearest birthday, there are only five different methods to be taken into account.

32. For adoption in connection with the 1931 Census Mr. Meikle recommended a method of grouping in alternate ternary and septenary groups 4-6, 7-13, etc., to be used in conjunction with the age nearest birthday. This method of grouping, according to my analysis, is a decided improvement on the old 0-4 method. There is, however, an inherent defect in the method in so far as it exaggerates bunchings in ages which are multiples of 10 and does not give full weight to those at ages which are multiples of 5. Ages of the former type occupy the central place amongst seven ages while those of the latter type occupy the central place amongst three ages only. It will, therefore, be evident that this method of grouping is based on the assumption that the concentration at ages ending in 0 is very nearly three times that at ages ending in 5. By reference to the ratios in Tables IX, X and XI it will be seen this is by no means the case. It was also pointed out earlier in this section that in two instances (Bombay and Madras, 1901) the actual proportion of concentration at ages ending in 5 was in excess of that at ages ending in 0.

33. It will, therefore, be desirable to slightly diminish the number of ages grouped along with an age ending in 0 and increase correspondingly the number grouped along with an age ending in 5. Since there is markedly greater concentration about ages ending in 0 than about 5, the number of ages in the former group should be larger than at the latter very nearly in proportion to the relative concentrations. I have, therefore, considered the claim for recognition of the following quaternary

and senary groupings in conjunction with age last birthday at the date of Census. A quaternary group is formed about an age ending in 5 which is placed centrally with an age and a half on either side of it. A senary group is formed about an age ending in 0 placed centrally with 2½ ages on either side of it. The earliest quaternary group comprises all persons whose ages are 3, 4, 5 and 6 last birthday. The next higher quaternary group is composed of persons of ages 13, 14, 15 and 16 last birthday and so on. The earliest senary group is formed of persons of ages from 7 to 12 last birthday, the next higher from 17 to 22 and so on. It would appear that these groups could easily be formed if the age asked for at the Census is last birthday. It will, however, be desirable not to sacrifice the greater accuracy secured, if any, in the ages returned by asking for the nearest age. If as at the 1931 Census groups are to be formed from the nearest age, the suggested quaternary and senary method of grouping will only necessitate dividing into two equal halves the numbers returned at all ages ending in 3 and 7. One half of the number at an age ending in 3 will be taken with the upper senary group and the other half with the lower quaternary group. Similarly half of the number returned at an age ending in 7 will be taken with the upper quaternary group and the other half with the lower senary group.

34. We have now to consider the relative accuracy of seven different methods of grouping which are described as follows :—

(1) 0-4 group called also 1st place method.
(2) 4-8 group called also 2nd place method.
(3) 3-7 group called also 3rd place method.
(4) 2-6 group called also 4th place method.
(5) 1-5 group called also 5th place method.
(6) The Ternary and Septenary method.
(7) The Quaternary and Senary method.

TABLE IX.

1911 Males.

Provinces.		Unit figure in age last birthday.									
		0	1	2	3	4	5	6	7	8	9
Bengal.	Ungraduated	253	43	121	56	64	187	76	57	106	37
	Graduated	124	115	109	104	100	96	93	89	86	84
	Ratio	2·0403	·3739	1·1101	·5385	·6400	1·9479	·9172	·6405	1·2326	·4440
	Deviation	+129	—72	+ 12	—48	—36	+91	—17	—32	+20	—47
	Order of record	(1)	(10)	(4)	(8)	(7)	(2)	(5)	(6)	(3)	(9)
	Ackland's order of record	(1)	(9)	(3)	(8)	(6)	(2)	(5)	(7)	(4)	(10)
	Total deviation irrespective of sign 504										
Bombay.	Ungraduated	292	43	110	56	60	215	66	47	78	33
	Graduated	122	114	109	104	100	96	93	90	87	85
	Ratio	2·3934	·3772	1·0092	·5385	·6000	2·2396	·7097	·5222	·8966	·3882
	Deviation	+170	—71	+1	—48	—40	+119	—27	—43	—9	—52
	Order of record .. .	(1)	(10)	(3)	(7)	(6)	(2)	(5)	(8)	(4)	(9)
	Ackland's order of record	(1)	(9)	(3)	(7)	(6)	(2)	(5)	(8)	(4)	(10)
	Total deviation irrespective of sign 580										
Burma.	Ungraduated	187	76	106	98	78	142	85	80	84	64
	Graduated	119	113	108	104	100	97	94	91	88	86
	Ratio	1·5714	·6725	·9815	·9423	·7800	1·4639	·9043	·8791	·9545	·7442
	Deviation	+68	—37	—2	—6	—22	+45	—9	—11	—4	—22
	Order of record .. .	(1)	(10)	(3)	(5)	(8)	(2)	(6)	(7)	(4)	(9)
	Ackland's order of record	(1)	(9)	(3)	(4)	(8)	(2)	(5)	(7)	(6)	(10)
	Total deviation irrespective of sign 226										

Provinces.		Unit figure in age last birthday.									
		0	1	2	3	4	5	6	7	8	9
Madras.	Ungraduated	264	48	113	64	73	171	89	48	90	40
	Graduated	120	112	108	104	100	97	94	91	88	86
	Ratio	2·2000	·4285	1·0463	·6154	·7300	1·7629	·9468	·5275	1·0227	·4651
	Deviation	+144	—64	+5	—40	—27	+74	—5	—43	+2	—46
	Order of record	(1)	(10)	(3)	(7)	(6)	(2)	(5)	(8)	(4)	(9)
	Ackland's order of record	(1)	(9)	(3)	(7)	(6)	(2)	(5)	(8)	(4)	(10)
	Total deviation irrespective of sign 450										
Punjab.	Ungraduated	279	44	110	55	67	198	78	49	84	36
	Graduated	120	113	108	104	100	97	94	91	88	85
	Ratio	2·3250	·3894	1·0185	·5288	·6700	2·0412	·8298	·5385	·9545	·4275
	Deviation	+159	—69	+2	—49	—33	+101	—16	—42	—4	—49
	Order of record	(1)	(10)	(3)	(8)	(6)	(2)	(5)	(7)	(4)	(9)
	Ackland's order of record..	(1)	(9)	(3)	(7)	(6)	(2)	(5)	(8)	(4)	(10)
	Total deviation irrespective of sign 524										
United Provinces.	Ungraduated	294	47	113	45	65	186	83	43	91	33
	Graduated	119	112	108	104	100	97	94	91	89	86
	Ratio	2·4706	·4196	1·0463	·4327	·6500	1·9175	·8830	·4725	1·0225	·3837
	Deviation	+175	—65	+5	—59	—35	+89	—11	—48	+2	—53
	Order of record	(1)	(9)	(3)	(8)	(6)	(2)	(5)	(7)	(4)	(10)
	Ackland's order of record	(1)	(7)	(3)	(8)	(6)	(2)	(5)	(9)	(4)	(10)
	Total deviation irrespective of sign 542										
All-India.	Ungraduated	262	50	112	62	68	183	79	54	89	10
	Graduated	121	113	108	104	100	97	94	90	88	85
	Ratio	2·1652	·4425	1·0370	·5962	·6800	1·8865	·8404	·6000	1·0114	·4824
	Average deviation ..	+141	—63	+4	—42	—32	+86	—14	—36	+1	—45
	Order of record	(1)	(10)	(3)	(8)	(6)	(2)	(5)	(7)	(4)	(9)
	Ackland's order of record	(1)	(9)	(3)	(7)	(6)	(2)	(5)	(8)	(4)	(1)
	Total deviation irrespective of sign 466										

TABLE X.

1901 Males.

Bengal.	Ungraduated	234	47	135	57	74	169	82	60	98	44
	Graduated	123	114	109	104	100	96	93	90	87	84
	Ratio	1·9024	·4123	1·2385	·5481	·7400	1·7604	·8817	·6667	1·1264	·5238
	Deviation	+111	—67	+26	—47	—26	+73	—11	—30	+11	—40
	Order of record	(1)	(10)	(3)	(8)	(6)	(2)	(5)	(7)	(4)	(9)
	Total deviation irrespective of sign 442										
Bombay.	Ungraduated	235	57	119	63	68	200	68	59	81	50
	Graduated	122	114	108	104	100	96	93	90	88	85
	Ratio	1·9262	·5000	1·1018	·6058	·6800	2·0833	·7312	·6556	·9205	·5882
	Deviation	+113	—57	+11	—41	—32	+104	—25	—31	—7	—35
	Order of record	(2)	(10)	(3)	(8)	(6)	(1)	(5)	(7)	(4)	(9)
	Total deviation irrespective of sign 456										
Burma.	Ungraduated	199	74	96	99	78	155	81	86	77	55
	Graduated	119	113	108	104	100	97	94	91	88	86
	Ratio	1·6723	·6549	·8889	·9519	·7800	1·5979	·8617	·9451	·8750	·6395
	Deviation	+80	—39	—12	—5	—22	+58	—13	—5	—11	—31
	Order of record	(1)	(9)	(5)	(3)	(8)	(2)	(7)	(4)	(6)	(10)
	Total deviation irrespective of sign 276										
Madras.	Ungraduated	169	104	100	93	90	138	81	77	76	72
	Graduated	120	113	108	104	100	97	94	91	88	85
	Ratio	1·4083	·9204	·9259	·8942	·9000	1·4227	·8617	·8462	·8636	·8471
	Deviation	+49	—9	—8	—11	—10	+41	—13	—14	—12	—13
	Order of record	(2)	(4)	(3)	(6)	(5)	(1)	(8)	(10)	(7)	(9)
	Total deviation irrespective of sign 189										

Provinces.		Unit figure in age last birthday.									
		0	1	2	3	4	5	6	7	8	9
Punjab.	Ungraduated	274	40	119	57	67	198	74	49	86	36
	Graduated	122	114	108	104	100	96	93	90	88	85
	Ratio	2·2459	·3509	1·1018	·5481	·6700	2·0625	·7957	·5444	·9773	·4235
	Deviation	+152	—74	+11	—47	—33	+102	—19	—41	—2	—49
	Order of record	(1)	(10)	(3)	(7)	(6)	(2)	(5)	(8)	(4)	(9)
	Total deviation irrespective of sign 530										
United Provinces.	Ungraduated	262	58	113	65	78	162	80	56	81	45
	Graduated	119	112	107	104	100	97	94	92	89	86
	Ratio	2·2016	·5179	1·0561	·6250	·7800	1·6701	·8511	·6087	·9101	·5233
	Deviation	+143	—54	+6	—39	—22	+65	—14	—36	—8	—41
	Order of record	(1)	(10)	(3)	(8)	(6)	(2)	(5)	(7)	(4)	(9)
	Total deviation irrespective of sign 428										
All-India.	Ungraduated	229	63	114	72	76	170	78	65	83	50
	Graduated	121	113	108	104	100	96	94	91	88	85
	Ratio	1·8925	·5575	1·0556	·6923	·7600	1·7708	·8298	·7143	·9432	·5882
	Average deviation ..	+108	—50	+6	—32	—24	+74	—16	—26	—5	—35
	Order of record	(1)	(10)	(3)	(8)	(6)	(2)	(5)	(7)	(4)	(9)
	Total deviation irrespective of sign 376										

TABLE XI.

1891 Males.

Bengal.	Ungraduated	249	49	122	61	70	170	79	61	94	45
	Graduated	122	114	108	104	100	97	93	90	87	85
	Ratio	2·0410	·4298	1·1296	·5865	·7000	1·7526	·8495	·6778	1·0804	·5294
	Deviation	+127	—65	+14	—43	—30	+73	—14	—29	+7	—40
	Order of record	(1)	(10)	(3)	(8)	(6)	(2)	(5)	(7)	(4)	(9)
	Total deviation irrespective of sign. 442										
Bombay.	Ungraduated	288	37	116	51	66	213	67	44	78	40
	Graduated	122	114	108	104	100	97	93	90	87	85
	Ratio	2·3606	·3246	1·0741	·4904	·6600	2·1959	·7204	·4889	·8966	·4706
	Deviation	+166	—77	+8	—53	—34	+116	—26	—46	—9	—45
	Order of record	(1)	(10)	(3)	(7)	(6)	(2)	(5)	(8)	(4)	(9)
	Total deviation irrespective of sign 580										
Burma		*	..	..	..	..	..	..	..	..	..
Madras.	Ungraduated	310	33	102	59	68	185	77	44	92	30
	Graduated	121	113	108	104	100	97	93	91	88	85
	Ratio	2·5620	·2920	·9444	·5673	·6800	1·9072	·8280	·4835	1·0456	·3529
	Deviation	+189	—80	—6	—45	—32	+88	—16	—47	+4	—55
	Order of record	(1)	(10)	(4)	(7)	(6)	(2)	(5)	(8)	(3)	(9)
	Total deviation irrespective of sign 562										
Punjab		†	..	..	..	..	..	..	..	..	..
United Provinces.	Ungraduated	301	45	114	56	67	177	78	47	80	35
	Graduated	120	113	108	104	100	97	94	91	88	85
	Ratio	2·5083	·3982	1·0555	·5384	·6700	1·8247	·8298	·5165	·9091	·4118
	Deviation	+181	—68	+6	—48	—33	+80	—16	—44	—8	—50
	Order of record	(1)	(10)	(3)	(8)	(6)	(2)	(5)	(7)	(4)	(9)
	Total deviation irrespective of sign 534										
All-India.	Ungraduated	287	41	114	57	68	186	75	49	86	38
	Graduated	121	114	108	104	100	97	93	90	88	85
	Ratio	2·3719	·3596	1·0556	·5481	·6800	1·9175	·8065	·5444	·9773	·4471
	Average deviation ..	+166	—73	+6	—47	—32	+89	—18	—42	—1	—48
	Order of record	(1)	(10)	(3)	(8)	(6)	(2)	(5)	(7)	(4)	(9)
	Total deviation irrespective of sign 522										

* For reasons explained by him Sir George Hardy did not make any investigation with the Burma figures.

† It was not possible to include the Punjab in the 1891 Analysis as the ages next birthday were tabulated for that Province at that Census.

35. It will be desirable here to say a few words about the two criteria by which the suitability of any method of grouping is generally tested. The first criterion is what is called "goodness of fit". According to this criterion that method of grouping is the best which yields values at individual ages which deviate the least in the aggregate from the originally observed values. The second criterion relates to "smoothness" and helps to single out that method of grouping as the best which makes the values progress smoothly from one group to another.

36. Each of the first five methods of grouping was the subject of more than one severe test in the past with the view to find out which of them gave the most satisfactory result. In that gigantic work in connection with the preparation of Life Tables for the United States of America for 1890, 1901, 1910 and 1901-1910, Mr. James W. Glover, Professor of Insurance in the University of Michigan, conducted elaborate investigations with the statistics relating to the male population in the State of New York estimated as of July 1910 and the deaths of the three-year period 1909-1911.

37. In testing "goodness of fit" his first method was to obtain the rates of mortality for all ages from 15 to 85 by a method of osculatory interpolation when the population and the deaths were combined according to each of the five quinquennial age groups. These rates were compared with the rates of mortality obtained from the average of these five sets of graduated populations and statistics of deaths. The smallness of the deviations and the frequency with which these deviations changed sign were made the criterion by which to judge which method of grouping gave the most satisfactory result. By his second method he obtained the deviations of the expected from the actual deaths for each of the five methods of grouping. His third criterion was to consider that method of grouping the best which made the weighted squared deviations of the graduated values from the observed values a minimum. Each of the three methods detailed above can only be of theoretical interest to us in India so long as the records of Vital Statistics are in the present state of unreliability.

38. Instead of comparing the rates of mortality as deduced by every one of the methods of quinquennial grouping with the average for all groupings or with the observed rates of mortality as Professor Glover did because the data supplied to him comprised *inter alia* dependable statistics of deaths, I had, in the absence of this desideratum, no other option but to compare the actual numbers in each group for each method with the corresponding expected (or what is the same thing graduated) number. Whatever may be the actual groups in which the original statistics are collected they have to be finally transformed to the 0-4 groups (1st place method). This is more or less essential as the Age Statistics of most other countries and of India itself have all been published in this form and if any other method of grouping be adopted for the final presentation of population figures, comparisons with other countries and with past Censuses of India itself, which are always of very great value in Census study, would be practically impossible. The three Tables XV, XVI and XVII appearing at the end of this section show for the All-India Males in each of the three Censuses, 1891, 1901 and 1911, the deviations between the actual numbers returned at the Censuses and the graduated numbers in 5-9, 10-14, etc., groups for all the methods of grouping. It will be seen that, according to all the other methods except the first, the original statistics are not collected in 0-4 groups (*i.e.*, according to the 1st place method). All the other six methods were transformed from their respective groups to the 0-4, etc., groups which, as observed above, is desirable with the view to effect useful comparisons with other Census Statistics.

39. A word of explanation as to how this transformation from the original grouping to the 0-4 grouping should be effected may be necessary. Taking for instance the 2nd place method, the group, say, 4-8 should part with a fifth of the total ungraduated number in that group to the previous group and obtain a fifth of the total ungraduated number from the following, namely, 9-13 group. The result can very nearly be taken to be the 5-9 group and so on for transforming other groups. Similarly the 3rd place method of grouping should cede the population relating to ages ending in 3 and 4 to the preceding group and obtain the population relating to ages ending in 8 and 9 from the succeeding group. Each group should therefore cede two-fifths of its number to the preceding group and

obtain two-fifths of the number in the succeeding group. The adjustments to be made to the 4th and 5th place methods of grouping to transform them to the 1st place method should now be evident.

40. The assumption is made in this process of transforming one group into another that the numbers in all the ages in a quinquennial group are equal and no allowance is made for the progressive diminution of the population from age to age in that group. I have, however, satisfied myself that except at the ages of infancy and childhood and at the extreme old ages (say, above 70) the resulting error is of small magnitude. At the early ages, however, statistics of population should be tabulated according to single age periods and at the very old ages the statistics are usually combined into a single group, say, 70 and over. It will, therefore, be evident that at those age periods where the grouping device is adopted to minimise the effects of minor mis-statements of age the error introduced by the above assumption is of no great moment. The ternary-septenary and the quaternary-senary methods of grouping are transformed easily into 0-4, etc., groups by the dichotomous process explained by Mr. Meikle with respect to the former method of grouping which he advocated. By this method groups are formed by taking the sum of one-half of any two consecutive groups and the resulting new groups are of the 0-4, 5-9, etc., type.

41. The smallness of the number called "total deviation without sign" is the basis by which to judge each of the seven methods for the first criterion, namely, "goodness of fit".* This number shows the sum of the deviations (whether in excess or in defect) of the recorded numbers from the graduated numbers when the former in each of the six methods of grouping (except of course the first which is in the required form) are finally transformed into 0-4, 5-9, etc., groups by processes of which full explanation was given above. The algebraic sum of the deviations does not provide the criterion by which to judge the methods, as two deviations, one very large and positive and another negative and equal or very nearly equal, would produce a small algebraic sum of the deviations in spite of the large error of the observed number in each case from the ideal number. Judged by the criterion of the smallness of the "total deviation without sign" it will be evident that the 4th place method (2-6, 7-11, etc., groups) is foremost in rank of all the seven methods considered. The sum of the deviations irrespective of sign is the smallest for this method in each of the three Censuses considered. Second in rank as regards accuracy is the "Quaternary and Senary" method explained in detail earlier in this section though the "Ternary and Septenary" method shows itself as slightly superior at the 1891 Census, but this is more than compensated for by the very large differences in the other two Censuses in favour of the former method. It will be of interest to note that the 1st place method (0-4, etc., groups) shows the largest deviation of all the seven methods in all the three Censuses. This is the method of grouping of the population that had been adopted in the past and Mr. Meikle was quite justified in condemning this method as the least accurate of all the methods of grouping population statistics in India.

42. I felt it might be of interest to ascertain which of the seven methods gave the least deviation between graduated and ungraduated numbers in their original groups themselves before the transformation into 0-4, etc., groups was effected. The results are set out in the following Table:—

TABLE XII.

All-India—Males.

Year of Census.	Total deviation without sign.						
	1st place method. '0—4.'	2nd place method. '4—8.'	3rd place method. '3—7.'	4th place method. '2—6.'	5th place method. '1—5.'	Ternary and Septenary method.	Quaternary and Senary method.
1891	49,062	51,348	67,473	43,373	50,470	39,227	46,083
1901	66,580	61,227	81,085	51,174	55,564	59,563	52,122
1911	58,531	57,874	73,915	47,487	62,561	52,148	52,798

43. It will be seen from an examination of the figures of deviations in the above Table that '2-6' method shows the least deviation between ungraduated and graduated numbers before the original groups in which the population statistics are

* This test is usually adopted to judge the closeness of fit of the graduated numbers to the observed ones. Here, however, it has to be used contrariwise.

summed are altered to produce the '0-4' groups. In one instance (1891) when the errors in age were very large in magnitude, the Ternary and Septenary method shows a deviation smaller than the '2-6' method. But this is more than compensated for by the large difference between the deviations of the two methods in favour of the '2-6' method at the other two Censuses. The deviations appearing in the above Table do not provide a very important criterion by which to judge the methods as ultimately all the six methods (except the first) are altered to the groupings of the first one.

44. As for the second criterion, namely, "smoothness" by which to judge the methods of grouping, it is satisfactory to be able to say that I have been able to adopt the same method of analysis as was adopted by Professor Glover with the population statistics relating to the United States of America above referred to. The smoothness of a series of values grouped in five ages is tested by the regularity of progression of the ratio $\frac{G_x}{G_{x-5} + G_{x+5}}$ where G_x is the total for ages from x to $x+4$ inclusive. Such ratios were formed from '0-4' groups for each of the seven methods of grouping considered. As when testing the methods for "goodness of fit", the groupings in such of them, six in number, as were not originally in the '0-4' groups were transformed to these groups. Where the earliest age in a quinquennial group in the numerator of the above ratio is a multiple of 10 the ratio is called ${}_0M_x$ and where the earliest age is a multiple of 5 it is called ${}_5M_x$. For instance, the ratio $\frac{G_{20}}{G_{15} + G_{25}}$ is called ${}_0M_{20}$ and the ratio $\frac{G_{25}}{G_{20} + G_{30}}$ is called ${}_5M_{25}$. The three Tables XVIII, XIX and XX give the values of ${}_0M_x$ and ${}_5M_x$ for each of the seven methods of grouping in each of the three Censuses 1891, 1901 and 1911. The average values of ${}_0M_x$ and ${}_5M_x$ and the difference between the average values of these quantities are given below each method of grouping. To make it easy to understand that the method which gives smooth progression of the grouped values is that for which the difference between the average value of ${}_0M_x$ and ${}_5M_x$ is a minimum, the values of ${}_0M_x$ and ${}_5M_x$ for the graduated population in each Census are also given. The graduated numbers of the population progress smoothly from age to age and therefore the quinquennial groups formed from them should also progress smoothly. That they do so is demonstrated by the extremely small magnitude of the difference between the average value of ${}_0M_x$ and ${}_5M_x$ for the graduated population in each of the three Censuses considered. The seven methods of grouping population statistics under consideration are arranged in each Table according to the smoothness of progression of the grouped values judged by the criterion of the smallness of the difference between the average value of ${}_0M_x$ and ${}_5M_x$.

45. The first rank of the '2-6' method amongst all the seven methods considered will be evident. The "Quaternary and Senary" method secures the second rank and the "Ternary and Septenary" method the third. It is not by a narrow margin that the '2-6' method secures the first rank. Even at the 1911 Census where the "Quaternary and Senary" method which is always second in rank makes the closest approach to the '2-6' method, the difference between the average ${}_0M_x$ and ${}_5M_x$ according to the former is more than 50 per cent. larger than the corresponding difference of the latter. What may be of interest is that the '0-4' method (the method of grouping population statistics adopted so far) in addition to occupying uniformly the last rank in all the three Censuses shows at each Census a figure of difference several times larger than that of the '2-6' method and in the 1901 Census it was very nearly 20 times as large. The method, therefore, so far adopted in grouping population statistics has been the least accurate of all the methods considered from every point of view.

46. As a result of his analysis, Prof. Glover rejected the '0-4' and '1-5' methods as unsuitable and was not able to pronounce as decisive an opinion in favour of one of the other three methods, '2-6', '3-7' and '4-8', as it has been possible to do with the analysis on Indian Age Returns for the main reason that the mis-statements of age in the American Census Returns are not so pronounced as in the case of the Indian Returns. He ultimately decided in favour of the '4-8' method and his arguments for so doing may be quoted in his own words. "However, the decision as to groups '2-6', '3-7' and '4-8' still remains a problem. As between these three groups it will be observed that groups '2-6' and '3-7'

contain both the ages ending in the digits 0 and 8 in the same quinquennial age group while the adjacent five-year groups contain the ages ending in the digit 5. This tends to exaggerate unduly alternate quinquennial age groups in these sets. With the group '4-8', however, the ages ending in the digits 5 and 8 are in the same quinquennial group and the ages ending in the digit 0 are in the adjacent five-year groups. Since the exaggeration for ages which are multiples of 10 is undoubtedly greater than for ages which end in the digit 5, the group '4-8' would seem to furnish a better balanced grouping than the group '2-6' or '3-7'."

47. It will be evident from Prof. Glover's arguments that the chief reason why he decided in favour of the '4-8' grouping is the fact that in U. S. A. Age Returns ages ending in digit 8 formed definite centres of attraction next in popularity after the two digits 0 and 5. To secure, therefore, a better balance of the errors between two consecutive quinquennial groups he decided to keep the most favoured digit 0 in one group and the next two favoured digits 5 and 8 together in the adjacent quinquennial group. The late Mr. George King who analysed the population of England and Wales with the 1911 Census also pronounced in favour of the '4-8' method as his analysis also revealed that ages ending in digit 8 were nearly as favoured as ages ending in 5 which is shown by the following Table :—

TABLE XIII.

England and Wales, Males—1911. Ages 10—89.

Digit of age.	0	1	2	3	4	5	6	7	8	9
Ratio of recorded to graduated number on basis of 100,000 graduated at each age ..	1·0887	·9230	1·0094	·9687	·9941	1·0031	1·0016	·9661	1·0320	·9991
Ratio to digit 9 as shown by Mr. King ..	1·090	·924	1·010	·970	·995	1·004	1·003	·967	1·033	1·000

48. The results of three Australian Censuses appearing in Table VII also indicate concentration at ages ending in 8 of an intensity next only to ages 0 and 5.

49. Apart from the fact that the results of the analysis to which the three Censuses have been subjected have indicated the decided superiority of the '2-6' method of grouping over all the other methods taken in the comparison, we could have, on precisely the same arguments as induced Messrs. Glover and King to decide in favour of the '4-8' method, pronounced in favour of the '2-6' method. Their chief argument was that the second and third favoured digits, 5 and 8, should appear in one quinquennial group to balance the pronounced concentration at digit 0 which is the first favourite. Tables IX, X and XI appearing in this section have clearly indicated that in India digit 2 is the third favourite after 0 and 5 and not digit 8.

50. We should, therefore, include digits 2 and 5 in the same quinquennial group. The '2-6' and the '1-5' methods are the only two that satisfy this condition but the latter having an age of pronounced concentration at the end of a group can be *prima facie* rejected as unsuitable, leaving the choice only on the '2-6' method.

51. We are now in a position to see why the '2-6' method gives results, judged by any criterion, markedly superior to all the other methods. Any two consecutive groups of this method are formed from the two sets of digits, 2, 3, 4, 5, 6 and 7, 8, 9, 0, 1. It was shown earlier in this section that as between the two digits 3 and 7 it was not quite decisive which was repelled the more. These two digits appearing one along with digit 5 in one group and the other along with digit 0 in the other introduce, in so far as they are concerned, balancing errors in two adjacent groups. The marked concentration at digit 0 as compared with digit 5 should then be neutralized by combining with the former digits relatively unpopular as compared with those combining with the latter. The '2-6' method of grouping is able to effect this as digits 1 and 9 which are the least liked of the ten digits are grouped along with 0 as against 4 and 6 grouped with 5. The combination of 2 with the 5 group and that of 8 with the 0 group serve as the final correcting factor in this respect.

Recommendations for adoption at the 1941 Census.

52. (*a*) *Grouping.*—They say that figures speak more emphatically and convincingly than words and if that is so, it can be claimed that the unique position of the '2-6' method of grouping amongst all the seven methods considered, in minimising the effects of mis-statements of age in population statistics, has been established beyond any pale of doubt. I, therefore, very strongly recommend its being adopted at the 1941 Census.

53. (*b*) *Age.*—The method of grouping recommended is particularly easy to adopt if age last birthday is asked for at the Census. The change made in the 1931 Census of asking people to return their age on nearest birthday, though theoretically expected to diminish significantly the errors in the ages returned, does not appear to have had the desired effect. This is evident from the distribution according to each age at the 1931 Census of a sample of 100,000 persons of each sex of the Presidency of Madras and the Punjab which alone were forwarded to me as the available statistics showing the distribution of any sample at individual ages. Amongst the larger Indian States the Census Commissioner for Baroda has given age distribution of the population at individual ages. These samples indicate the same degree of concentration, as in the earlier Censuses, at the usual favourite digits. Had the change made in this respect at the 1931 Census any effect at all, the concentration at ages ending in 0 should have been more or less equally divided between ages ending in 0 and 1, for, if a person returns his or her completed age as a favourite figure, say, 30, it is as likely that the person has passed more than six months since completing age 30 as less than six months. If, therefore, all those persons, who usually give ages clustering round numbers ending in digits 0 and 5 when age last birthday is asked for, were to give a moment's thought to the change in the age to be returned because what is asked for is no longer age last birthday but nearest birthday, very nearly one half of them would have returned nearest ages ending in 0 and the other half those ending in 1. This would have had the effect of very nearly levelling up the concentration at digits ending in 0 by dividing it more or less equally between ages ending in 0 and 1. For a similar reason the concentration at ages ending in 5 should have been more or less equally divided between ages ending in 5 and 6. The statistics to which reference has been made do not exhibit any such tendency as the following Table for Madras clearly indicates thereby confirming the statement made at an earlier part of this section that people were not in the least influenced by the age asked for being last birthday, nearest birthday or next birthday.

TABLE XIV.

Madras—Males.

Numbers returned at each digit of age out of a total population of 1000.

Date of Census.	Digit of age.									
	0	1	2	3	4	5	6	7	8	9
1891	310	33	102	59	68	185	77	44	92	30
1901	169	104	100	93	90	138	81	77	76	72
1911	264	48	113	64	73	171	89	48	90	40
1931	253	53	108	64	62	208	68	52	95	37

The large deficiencies noticed in ages ending in 1 and 6 do not show any tendency to close up as a result of the change made in the 1931 Census in recording the age. On the other hand, the deficiency at 6 has been the largest at 1931 of all the four Censuses.

54. It has been observed in other countries that the form of the age enquiry has an appreciable influence on the accuracy of the Age Returns. Dr. A. A. Young, in his Report on ages at the 12th U. S. A. Census, applied a test to the data of several countries some of which obtained ages in years, others in years and months and a third set actually called for the date of birth. He concluded, as a result of his test, that the statistics were most dependable when the date of birth was called for.

55. To call for the date of birth will be an impossibility for several decades in the Census history of India. At the same time, while returning ages to the enumerator, people's minds should be set about thinking for a while instead of

returning any age at random. I should, therefore, recommend ages being called for in completed number of years and months. The enumerator should write in his form the number of completed years and months. While grouping, however, according to the '2-6' plan recommended, the months should be ignored. We shall thereby get the age last birthday which is best suited to the method of grouping recommended without in any way sacrificing the accuracy, if any, that might accrue to the Age Statistics by calling for something more than mere age last birthday. In those cases where the number of months passed since the last birthday cannot be obtained it is immaterial as the grouping is according to the completed number of years (that is, age last birthday) only. I do not make myself bold to say that the suggested method of asking for age last birthday and the number of months completed since last birthday will have any metamorphic effect at the 1941 Census. It might, however, have some effect of slowly curing the Age Returns of its ills as decades pass on, as otherwise, with the existing system of calling only for ages whether last birthday, next birthday or nearest birthday, the malady shows no signs of coming under control. If, however, it is considered too early in the Census history of India to burden the schedule with ages and months (though the latter are to be ignored in the grouping) the age last birthday with the suggested '2-6' method of grouping could be depended upon to give the best results of all the other methods of grouping.

56. In adopting the '2-6' method of grouping, returns for ages 0, 1, 2, etc., up to 6 last birthday should be scheduled separately and groups should be formed of ages 7-11, 12-16, 17-21, etc., to 67-71 with a last group of 72 and over. Table XXI gives a practical example of how the population supposed to have been straightaway sorted in the above groups are further transformed into 5-9, 10-14, etc., ... 65-69, 70 and over groups, with the returns at ages 0, 1, 2, 3 and 4 stated individually.

TABLE XV.
1891—All-India—Males.
Deviations.

Age group.	1st place method. '0—4'.	2nd place method. '4—8'.	3rd place method. '3—7'.	4th place method. '2—6'.	5th place method. '1—5'.	Ternary and Septenary method.	Quaternary and Senary method.
5—9	+6,254	+7,956	+8,348	+5,086	+7,253	+3,312	+5,479
10—14	—382	—1,488	—296	+465	—2,810	+1,276	—664
15—19	—8,901	—6,209	—7,626	—4,635	—2,269	—7,907	—7,437
20—24	—5,448	—5,508	—1,508	—1,466	—584	—1,952	—1,968
25—29	+1,393	+2,773	+1,822	+2,757	+3,888	+1,924	+2,118
30—34	+4,947	+3,013	+3,106	+1,718	—1,079	+2,387	+2,005
35—39	—488	+548	+838	+3,023	+4,719	+1,013	+1,217
40—44	+5,658	+3,690	+2,492	+110	—1,761	+1,268	+1,119
45—49	—2,029	—1,013	—626	+832	+1,704	—325	—234
50—54	+4,519	+2,507	+1,088	—992	—3,207	+81	—33
55—59	—2,678	—1,822	—1,027	+199	+1,164	—634	—586
60—64	+4,024	+2,643	+1,404	—106	—1,481	+660	+609
65—69	—1,327	—1,158	—1,021	—757	—605	—1,049	—1,004
70—74	+936	+535	+195	—207	—597	+15	—23
75—79	—78	+5	+76	+238	+288	+97	+106
	+27,731	+23,670	+19,369	+14,428	+19,016	+12,033	+12,653
	—21,331	—17,198	—12,104	—8,163	—14,393	—11,867	—11,949
Total deviation without sign.	49,062	40,868	31,473	22,591	33,409	23,900	24,602

TABLE XVI.
1901—Males—All-India.
Deviations.

Age group.	1st place method. '0—4'.	2nd place method. '4—8'.	3rd place method. '3—7'.	4th place method. '2—6'.	5th place method. '1—5'.	Ternary and Septenary method.	Quaternary and Senary method.
5—9	+11,543	+12,417	+12,513	+9,585	+12,265	+8,821	+10,485
10—14	+8,718	+6,151	+6,106	+6,960	+5,199	+8,125	+5,655
15—19	—10,595	—6,689	—7,219	—4,387	—4,034	—10,341	—9,024
20—24	—9,752	—9,111	—5,524	—5,142	—4,517	—5,418	—5,661
25—29	—407	+892	—60	+162	+1,700	—464	—71
30—34	+3,361	+1,537	+2,264	+1,490	—866	+2,084	+1,398
35—39	—1,771	—618	—459	+1,437	+2,215	—1,259	—809
40—44	+3,539	+1,709	+827	—747	—1,366	+198	—158
45—49	—1,535	—446	+1,124	+1,245	+1,905	—223	+21
50—54	+5,201	+3,118	+2,447	—214	—2,665	+916	+699
55—59	—2,029	—1,089	—2,157	+860	+1,866	—391	—223
60—64	+4,750	+3,021	+1,553	—112	—579	+843	+684
65—69	—1,500	—1,216	—1,102	—841	—893	—1,331	—1,236
70—74	+1,545	+877	+407	+17	—370	+317	+199
75—79	+334	+444	+525	+636	+660	+342	+414
	+38,991	+30,166	+27,766	+22,392	+25,810	+21,646	+19,555
	—27,589	—19,169	—16,521	—11,443	—15,290	—19,427	—17,182
Total deviation without sign.	66,580	49,335	44,287	33,835	41,100	41,073	36,737

TABLE XVII.

1911—All-India—Males.

Deviations.

Age group.	1st place method. '0—4'.	2nd place method. '4—8'.	3rd place method. '3—7'.	4th place method. '2—6'.	5th place method. '1—5'.	Ternary and Septenary method.	Quaternary and Senary method.
5—9	+6,619	+8,489	+8,760	+4,883	+8,501	+4,167	+6,351
10—14	+3,268	+1,038	+2,053	+2,651	—892	+3,574	+1,270
15—19	—10,130	—6,428	—7,928	—3,925	—643	—9,303	—8,310
20—24	—6,483	—6,279	—880	—774	—465	—1,235	—1,431
25—29	+2,540	+4,519	+2,714	+3,563	+5,285	+2,283	+2,693
30—34	+5,275	+3,031	+4,182	+2,792	—744	+3,558	+2,949
35—39	+388	+1,219	+1,298	+3,798	+5,648	+1,114	+1,432
40—44	+6,794	+4,399	+3,047	+513	—1,582	+1,827	+1,551
45—49	—1,253	—237	+101	+1,796	+2,772	+278	+436
50—54	+6,261	+3,590	+1,883	—687	—3,596	+684	+487
55—59	—3,338	—2,109	—1,384	—198	+842	—1,140	—1,053
60—64	+4,530	+2,802	+1,501	—89	—1,352	+719	+651
65—69	—861	—940	—1,103	—2,704	—1,085	—1,529	—1,396
70—74	+262	—219	—586	—1,069	—1,706	—714	—832
75—79	—529	—418	—262	—10	+184	—231	—211
	+35,937	+29,087	+25,539	+19,996	+23,232	+18,204	+17,820
	—22,594	—16,630	—12,143	—9,456	—12,065	—14,152	—13,233
Total deviation without sign.	58,531	45,717	37,682	29,452	35,297	32,356	31,053

TABLE XVIII.

1891 Census—All-India—Males.

Values of $_0M_x$ and $_5M_x$.

Transformed Age Groups.	Graduated.		'2—6'.		Quaternary and Senary method.		Ternary & Septenary method.		'3—7'.		'1—5'.		'4—8'.		'0—4'.	
	$_0M_x$.	$_5M_x$.	$_0M_x$.	$_5M_x$.	$_0M_x$.	$_5M_x$.	$_0M_x$.	$_5M_x$.	$_0M_x$.	$_5M_x$.	$_0M_x$.	$_5M_x$.	$_0M_x$.	$_5M_x$.	$_0M_x$.	$_5M_x$.
(1)	(2)		(3)		(4)		(5)		(6)		(7)		(8)		(9)	
10—14	·495	..	·498	..	·498	..	·536	..	·488	..	·441	..	·470	..	·505	..
15—19	..	·501	..	·451	..	·425	..	·409	..	·419	..	·494	..	·466	..	·424
20—24	·501	..	·494	..	·511	..	·516	..	·521	..	·483	..	·448	..	·476	..
25—29	..	·500	..	·540	..	·532	..	·526	..	·515	..	·573	..	·563	..	·525
30—34	·500	..	·482	..	·506	..	·515	..	·529	..	·420	..	·522	..	·576	..
35—39	..	·499	..	·540	..	·493	..	·484	..	·464	..	·630	..	·450	..	·404
40—44	·498	..	·458	..	·513	..	·520	..	·556	..	·394	..	·594	..	·676	..
45—49	..	·495	..	·534	..	·473	..	·467	..	·430	..	·642	..	·392	..	·333
50—54	·492	..	·436	..	·507	..	·514	..	·570	..	·331	..	·661	..	·815	..
55—59	..	·488	..	·528	..	·444	..	·438	..	·384	..	·725	..	·310	..	·241
60—64	·483	..	·495	..	·598	..	·607	..	·692	..	·358	..	·871	..	1·110	..
65—69	..	·470	..	·398	..	·333	..	·325	..	·299	..	·526	..	·248	..	·204
70—74	·441	..	·446	..	·529	..	·545	..	·588	..	·346	..	·704	..	·860	..
Total	3·410	2·953	3·309	2·991	3·662	2·700	3·753	2·649	3·944	2·511	2·773	3·590	4·270	2·429	5·018	2·131
Average	·487	·492	·473	·499	·523	·450	·536	·442	·563	·419	·396	·598	·610	·405	·717	·355
Difference between $_0M_x$. and $_5M_x$.	·005		·026		·073		·094		·144		·202		·205		·362	

TABLE XIX.

1901 Census—All-India—Males.

Values of $_0M_x$ and $_5M_x$.

Transformed Age Groups.	Graduated.		'2—6'.		Quaternary and Senary method.		Ternary and Septenary method.		'1—5'.		'3—7'.		'4—8'.		'0—4'.	
	$_0M_x$.	$_5M_x$.	$_0M_x$.	$_5M_x$.	$_0M_x$.	$_5M_x$.	$_0M_x$.	$_5M_x$.	$_0M_x$.	$_5M_x$.	$_0M_x$.	$_5M_x$.	$_0M_x$.	$_5M_x$.	$_0M_x$.	$_5M_x$.
(1)	(2)		(3)		(4)		(5)		(6)		(7)		(8)		(9)	
10—14	·495	..	·526	..	·531	..	·561	..	·503	..	·520	..	·518	..	·555	..
15—19	..	·500	..	·458	..	·427	..	·407	..	·465	..	·439	..	·457	..	·418
20—24	·500	..	·472	..	·490	..	·500	..	·470	..	·482	..	·441	..	·458	..
25—29	..	·500	..	·521	..	·522	..	·513	..	·547	..	·517	..	·551	..	·530
30—34	·500	..	·508	..	·521	..	·535	..	·468	..	·529	..	·516	..	·553	..
35—39	..	·499	..	·513	..	·480	..	·468	..	·546	..	·473	..	·470	..	·435
40—44	·498	..	·466	..	·502	..	·513	..	·446	..	·506	..	·535	..	·586	..
45—49	..	·496	..	·530	..	·491	..	·481	..	·579	..	·486	..	·444	..	·397
50—54	·493	..	·463	..	·513	..	·524	..	·390	..	·569	..	·594	..	·684	..
55—59	..	·491	..	·524	..	·462	..	·452	..	·641	..	·371	..	·379	..	·320
60—64	·488	..	·482	..	·556	..	·571	..	·399	..	·655	..	·698	..	·837	..
65—69	..	·479	..	·425	..	·373	..	·361	..	·482	..	·357	..	·314	..	·265
70—74	·454	..	·467	..	·525	..	·551	..	·424	..	·534	..	605	..	·722	..
Total	3·428	2·965	3·384	2·971	3·638	2·755	3·755	2·682	3·100	3·260	3·795	2·643	3·907	2·615	4·395	2·365
Average	·490	·494	·483	·495	·520	·459	·536	·447	·443	·543	·542	·441	·558	·436	·628	·394
Difference between $_0M_x$. and $_5M_x$.	·004		·012		·061		·089		·100		·101		·122		·214	

TABLE XX.

1911 Census—All-India—Males.

Values of $_0M_x$ and $_5M_x$.

Transformed Age Groups.	Age group in which Population is originally summed.															
	Graduated.		'2—6'.		Quaternary and Senary method.		Ternary and Septenary method.		'3—7'.		'4—8'.		'1—5'.		'0—4'.	
	$_0M_x$.	$_5M_x$.	$_0M_x$.	$_5M_x$.	$_0M_x$.	$_5M_x$.	$_0M_x$.	$_5M_x$.	$_0M_x$.	$_5M_x$.	$_0M_x$.	$_5M_x$.	$_0M_x$.	$_5M_x$.	$_0M_x$.	$_5M_x$.
(1)	(2)		(3)		(4)		(5)		(6)		(7)		(8)		(9)	
10—14	·497	..	·513	..	·513	..	·543	..	·509	..	·497	..	·464	..	·534	..
15—19	..	·501	..	·363	..	·435	..	·418	..	·433	..	·469	..	·501	..	·431
20—24	·501	..	·495	..	·514	..	·522	..	·517	..	·452	..	·477	..	·475	..
25—29	..	·500	..	·525	..	·519	..	·511	..	·510	..	·564	..	·560	..	·522
30—34	·499	..	·490	..	·509	..	·520	..	·523	..	·501	..	·435	..	·542	..
35—39	..	·498	..	·527	..	·488	..	·478	..	·470	..	·468	..	·594	..	·433
40—44	·497	..	·463	..	·507	..	·515	..	·534	..	·560	..	·414	..	·616	..
45—49	..	·495	..	·533	..	·484	..	·476	..	·452	..	·422	..	·614	..	·372
50—54	·493	..	·457	..	·513	..	·521	..	·559	..	·620	..	·368	..	·737	..
55—59	..	·491	..	·497	..	·439	..	·433	..	·400	..	·348	..	·620	..	·280
60—64	·489	..	·558	..	·583	..	·593	..	·627	..	·714	..	·432	..	·856	..
65—69	..	·480	..	·326	..	·392	..	·379	..	·384	..	·357	..	·511	..	·321
70—74	·462	..	·490	..	·451	..	·476	..	·468	..	·514	..	·310	..	·576	..
Total	3·438	2·965	3·466	2·771	3·590	2·757	3·690	2·695	3·737	2·649	3·858	2·628	2·900	3·400	4·336	2·369
Average	·491	·494	·495	·462	·513	·460	·527	·449	·534	·442	·551	·438	·414	·567	·619	·395
Difference between $_0M_x$. and $_5M_x$.	·003		·033		·053		·078		·092		·113		·153		·224	

TABLE XXI.

Age group.	Original population as sorted straight according to groups stated in (1).	·4 × 5 year groups of Col. (2).	—Δ of Col. (3).	(4) + (2) = adjusted population in '5—9' etc., groups.	Age group.
(1)	(2)	(3)	(4)	(5)	(6)
0	1,179	..	..	..	..
1	2,513	..	..	..	..
2	2,519	..	..	1,179	0
3	2,700	..	..	2,513	1
4	2,425	..	..	2,519	2
5	2,718	..	..	2,700	3
6	2,295	..	..	2,425	4
7—11	10,951	4,380	— 4,380	11,584	5—9
12—16	10,935	4,374	+ 6	10,941	10—14
17—21	9,641	3,856	+ 518	10,159	15—19
22—26	10,133	4,053	— 197	9,936	20—24
27—31	9,065	3,626	+ 427	9,492	25—29
32—36	8,086	3,234	+ 392	8,478	30—34
37—41	7,471	2,988	+ 246	7,717	35—39
42—46	5,119	2,048	+ 940	6,059	40—44
47—51	4,332	1,733	+ 315	4,647	45—49
52—56	2,442	977	+ 756	3,198	50—54
57—61	2,566	1,026	— 49	2,517	55—59
62—66	1,200	480	+ 546	1,746	60—64
67—71	899	360	+ 120	1,019	65—69
72 and over	811	0	+ 360	1,171	70 and over
	100,000	..	..	100,000	..

SECTION IV.

1. In this section I shall attempt a brief description of the methods adopted in the construction of mortality Tables for the various Provincial groups detailed in the opening pages of this Report with some discussion on topics relevant thereto.

2. It was explained in an earlier section of this Report, that, in view of the conditions prevailing in the decennium 1921-1931, the Table of mortality of each area was to embody the experience of this decennium only. The statistics of population used therefore were only those relating to the 1921 and 1931 Censuses without any reference to earlier enumerations. The population of each area at the 1931 Census is available for nearest age on Census day—this having been the age asked for according to instructions to enumerators—for ages 0, 1, 2 and 3 stated separately and in alternate ternary and septenary groups 4-6, 7-13, 14-16, 17-23, etc., to 67-73 with one large group at the end of 74 and over. The passage from ternary and septenary groups to the ordinary quinquennial age groups 0-4, 5-9, etc., is effected very easily by taking half the sum of two consecutive age groups. For instance, the age group 5-9 is obtained by taking the sum of one half of the ternary group 4-6 and one half of the septenary group 7-13. It should also be noted that the resulting quinary group 5-9, on the assumption that the ages returned were the ages nearest birthday, would include all persons whose ages were 5, 6, 7, 8, and 9 last birthday. In this way the statistics of the population returned at the 1931 Census were arranged in quinquennial age periods 0-4, 5-9, etc., to 65-69 with one large group at the end of 70 and over, according to age last birthday in conformity with the method of grouping adopted at the previous enumerations in India to facilitate comparison. The numbers in each age group were reduced by a constant ratio so as to produce a total of 100,000 for all ages.

Correction for Mortality.

3. The method described above of redistributing the original ternary and septenary age groups into quinary groups introduces an error—though not very material—due to the fact that in the process of redistribution the assumption has been made that the numbers relating to each age in each septenary and ternary group are equal to one another and no allowance has been made for the progressive diminution of these numbers as age increases in each group due to the operation of mortality.

4. To allow for this error Mr. Meikle recommended certain percentages being transferred from groups like 10-14, 20-24, 30-34, etc., to the respective earlier groups, 5-9, 15-19, 25-29, etc. I have, however, to state with regret that I have not been able to satisfy myself as to how quinquennial groups with the earliest age a multiple of 10 like 20-24, 30-34, etc., alone have to part with certain percentages to the respective earlier groups. Taking, for instance, the transformed quinary group 30-34 one can easily see that this age group is made up of the lower half of the septenary group 27-33 and the upper half of the ternary group 34-36. In so far as it is made up of the lower half of the septenary group 27-33 it owes a certain number to the upper half of the same septenary group which is amalgamated with the quinary group 25-29. Again in so far as this age group 30-34 is made up of the upper half of the ternary group 34-36 it took rather less than its correct quota from that group when it was bisected and the upper half taken with the 30-34 group and the lower half with the 35-39 group. I think therefore any age group like 30-34 owes a certain number to the previous age group 25-29 and has to get another number from the succeeding age group 35-39. This is the case with respect to all transformed quinary groups. It is true that age groups like 30-34, 40-44 and so on with the earliest number in the group a multiple of 10 owe to the respective preceding quinary groups more than what they have to get from the succeeding ones with the result that on final adjustment they have to meet with a net diminution. But if we deal with the net diminution only and transfer this net amount entirely to the upper age group we shall be, what in common parlance is called, "robbing Peter to pay Paul" and our final adjustments will not be quite correct in transferring numbers from one age group to another to that degree of approximation which it is desirable to have if mortality correction is to be given effect to.

5. I have, on the same assumption as made by Mr. Meikle which is accurate enough for our present purpose, calculated this mortality correction to be applied

to each group. I shall represent by the symbol s_{30} the total number in the septenary group of which 30 is the middle age and so on for other septenary groups. Similarly t_{25} represents the total in the ternary group of which 25 is the middle age and so on for other ternary groups. The total number s_{30} in the septenary group 27-33, for instance, can be assumed approximately to be distributed at each of the seven ages in that group as follows :—

$\frac{s_{30}}{7}(1+3\,q_{30})$ as of nearest age 27,

$\frac{s_{30}}{7}(1+2\,q_{30})$ as of nearest age 28,

$\frac{s_{30}}{7}(1+\ q_{30})$ as of nearest age 29,

$\frac{s_{30}}{7}$ as of nearest age 30,

$\frac{s_{30}}{7}(1-q_{30})$ as of nearest age 31,

$\frac{s_{30}}{7}(1-2\,q_{30})$ as of nearest age 32,

$\frac{s_{30}}{7}(1-3\,q_{30})$ as of nearest age 33.

The upper half of the above distribution relating to the age group from exact age $26\frac{1}{2}$ to exact age 30 should contain (the q's denoting rates of mortality throughout) $\frac{s_{30}}{7}(1+3q_{30})+\frac{s_{30}}{7}(1+2q_{30})+\frac{s_{30}}{7}(1+q_{30})+\frac{1}{2}\frac{s_{30}}{7}$ which is equal to $\frac{1}{2}\,s_{30}+\frac{6}{7}\,s_{30}\,q_{30}$.

Instead, therefore, of taking $\frac{1}{2}\,s_{30}+\frac{6}{7}\,s_{30}q_{30}$ as relating to the upper half of the septenary group 27-33 and $\frac{1}{2}\,s_{30}-\frac{6}{7}\,s_{30}q_{30}$ to the lower half, the method of bisection takes $\frac{1}{2}\,s_{30}$ to both the halves. It will therefore be evident that age group 30-34 has to cede $\frac{6}{7}\,s_{30}q_{30}$ to the group 25-29. Considering similarly the ternary group 34-36 it can easily be seen by a similar analysis that the group 30-34 has to get $\frac{1}{3}\,t_{35}q_{35}$ from the group 35-39. The whole scheme of correction is given in the following Table :—

Quinquennial age group.	Should give to the preceding quinquennial group.	Should get from the succeeding quinquennial group.
0—4	..	$\frac{1}{3}\,q_5\,t_5$
5—9	$\frac{1}{3}\,q_5\,t_5$	$\frac{6}{7}\,q_{10}\,s_{10}$
10—14	$\frac{6}{7}\,q_{10}\,s_{10}$	$\frac{1}{3}\,q_{15}\,t_{15}$
15—19	$\frac{1}{3}\,q_{15}\,t_{15}$	$\frac{6}{7}\,q_{20}\,s_{20}$
20—24	$\frac{6}{7}\,q_{20}\,s_{20}$	$\frac{1}{3}\,q_{25}\,t_{25}$
25—29	$\frac{1}{3}\,q_{25}\,t_{25}$	$\frac{6}{7}\,q_{30}\,s_{30}$
30—34	$\frac{6}{7}\,q_{30}\,s_{30}$	$\frac{1}{3}\,q_{35}\,t_{35}$
35—39	$\frac{1}{3}\,q_{35}\,t_{35}$	$\frac{6}{7}\,q_{40}\,s_{40}$
40—44	$\frac{6}{7}\,q_{40}\,s_{40}$	$\frac{1}{3}\,q_{45}\,t_{45}$
45—49	$\frac{1}{3}\,q_{45}\,t_{45}$	$\frac{6}{7}\,q_{50}\,s_{50}$
50—54	$\frac{6}{7}\,q_{50}\,s_{50}$	$\frac{1}{3}\,q_{55}\,t_{55}$
55—59	$\frac{1}{3}\,q_{55}\,t_{55}$	$\frac{6}{7}\,q_{60}\,s_{60}$
60—64	$\frac{6}{7}\,q_{60}\,s_{60}$	$\frac{1}{3}\,q_{65}\,t_{65}$
65—69	$\frac{1}{3}\,q_{65}\,t_{65}$	$\frac{6}{7}\,q_{70}\,s_{70}$
70 and over	$\frac{6}{7}\,q_{70}\,s_{70}$	..

To give effect to the mortality correction in each Provincial group I adopted the rates of mortality from the 1911 Actuarial Report relating to the Province. Where any Provincial group is dealt with for the first time the rates of mortality relating to the whole of India were taken.

6. The population of each area according to the 1921 Census is available in the usual 0-4, 5-9, etc., groups according to age last birthday. With the view, however, to bring the population statistics of 1921 in conformity with those of 1931, ternary and septenary groups were formed from the sample of 100,000 for each sex available in respect of each area. These samples are available for each Census unit. To obtain samples applicable to each of the ten large geographical groups for which separate mortality Tables were to be constructed, the distribution according to each age in each Census unit was weighted according to the population in that unit and a new sample applicable to the geographical area dealt with was formed.

7. For instance, the Madras group is composed of the following Census units :—

(*a*) The British Province of Madras (including the small States of Pudukkottah, Banganapalli and Sandur).

(*b*) Mysore State.

(*c*) Travancore State.

(*d*) Cochin State.

(*e*) Coorg.

The sample age distribution out of a total of 100,000 for each sex in each of the above areas was weighted at each age according to the population (taken to the nearest million) in that area and the sum of the products thus obtained was divided by the sum of the weights. In this manner was formed the sample distribution at each age out of a total population of 100,000 in each sex for each of the ten large areas into which the whole of India (including Burma) was divided for the purpose of this analysis. I have also made suitable adjustments to transform each ternary and septenary age group of the 1921 population in each area from age last birthday to age nearest birthday. From the ternary and septenary age groups, quinary groups 0-4, 5-9, etc., for ages last birthday were formed in the same manner as with the 1931 Return.

Migration.

8. Allowance was made at this stage for the disturbance caused by migration in the case of those Provincial groups where it was of such magnitude as to affect the rate of increase of the population or its age distribution. Taking India as a whole, for its size and the magnitude of its population, immigration and emigration, as observed by the Census Commissioner, Dr. Hutton, are practically unimportant. The direct effect of dividing India into ten large sections including British Provinces and the adjoining States has been to neutralize the large movement of population between contiguous political divisions where these are grouped together. The grouping has rendered ineffective, for instance, making any allowance for the presence of the large number of Bengalis in Assam and Madrasis in Mysore, Travancore and Cochin States and *vice versa.* In the Provincial groups of Madras and the United Provinces and in the group Bengal and Assam, migration, in spite of the neutralizing force above referred to, was too significant to be ignored. In the case of the first two groups the balance of migration was adverse in each of the two Censuses taken in 1921 and 1931. The total number of net emigrants per 100,000 of the total population at the respective Censuses in the case of each of these two Provincial groups was added to the quinquennial groups above referred to representing age distribution per 100,000 of total population in each sex. The age distribution of the migrant population was taken to be the same as was estimated by Sir George Hardy in 1891 by reference to the three Provinces, Coorg, Berar and Lower Burma where the immigrant population was relatively very large. Sir George has given full explanation of the methods followed by him in his 1891 Report. In the case of the Provincial group, Bengal and Assam, the balance of migration was in favour. The disturbance caused in the case of Burma by the presence in that Province of a large immigrant male population was eliminated by confining my investigation to Buddhists only who form almost entirely the indigenous population of that Province engaged almost exclusively in agricultural pursuits and of a non-migratory temperament. In this respect my investigation has fallen in line with all the earlier ones and

it is desirable that it should do so from another point of view. The Burman Buddhists have been observed in the past, as has also been confirmed by my investigation, to experience mortality markedly superior to that of Hindus or Muhammadans. To have combined the Buddhists of Burma with those following other religions would have introduced an element of heterogeneity in the investigation very much undesirable. The assumed age distribution of the emigrant population in the case of Madras and the United Provinces and of the immigrant population of Bengal and Assam enabled the correction due to migration disturbances being easily applied in each age group to the population of these Provincial groups in 1921 and 1931 respectively. The corrected population in each Census was again proportioned for in each quinary group relative to a total of 100,000 and the arithmetic mean of the two corrected populations was obtained in each age group.

Graduation.

9. It is now necessary to graduate or adjust the figures in each quinary group of the mean population, obtained by processes described above, with the view to remove or at best reduce to a minimum the effect of major and minor errors (referred to in detail in the last section) inherent to population statistics particularly in India. With this end in view it was decided to adopt a mathematical formula which, while producing a smooth progression of numbers from one quinquennial group to another, provided also a law by which the number at each age could be easily obtained.

10. The method of graduation adopted was with reference to a standard Table recommended by the late Mr. Alfred Henry in the discussion on a Paper submitted to the Institute of Actuaries by Mr. Ackland in connection with his 1911 Report to the Government of India. Mr. Meikle also adopted this method though that of Mr. Ackland was curve fitting and Sir George Hardy made use of a formula of graduation based on a modification of Makeham's Law. The choice of the Table to be used as the standard was a matter that required some investigation. The standard chosen has to be perfectly smooth and should preferably have been graduated by a mathematical formula. A first attempt was made by using the English Life Table No. 9. A suitable addition was made to the age in the ungraduated Indian population statistics to allow for the higher mortality prevailing in India as compared to England. Several trial graduations were made and the number of years added to the age in each quinary group of the Indian population before effecting comparison with the English population in corresponding age groups was varied from trial to trial. It was ultimately found that a rating up of between 10 and 11 years to the Indian age gave a smooth progression of the population from age to age, which, combined with the graduated rates of increase to be described later, gave satisfactory rates of mortality from only about age 35 onwards. It would therefore have been necessary to modify the Proclaimed Clans experience, more than half a century old by now, not only to supply the rates of mortality at the ages of infancy and childhood up to age 12, at which that experience stopped, but also to fill up the large gap between ages 12 and 35 by a smooth junction at both ends. This would have been entirely unsatisfactory. Mr. Meikle rejected, quite rightly, the Proclaimed Clans experience as entirely unsuitable for his purpose. They are still more so now. Mr. Ackland had made suitable adjustments to the Proclaimed Clans experience, on the basis of the rates of mortality derived by him at the older ages, to make it yield rates which would approximately reflect the mortality at the ages of infancy and childhood. One advantage, therefore, in adopting the Indian Life Table for 1911, which was also graduated by a mathematical formula and therefore satisfied the condition of being perfectly smooth, was to have on hand a Table in which the experience relating to the very young ages has been brought up to comparatively recent times. Another advantage, which is in my view rather substantial, is the fact that comparisons could be made and the requisite ratios—the subject of graduation—could be formed without making any addition to the age of the ungraduated population. I have found that in comparing with English Life Table the addition to the age which was necessary to produce a good fit at ages, say, from 30 to 65 or 70 was too large at the very young and the very old ages. I therefore adopted the Male Life Table prepared for the whole of India by Mr. Ackland as the standard Table for the graduation of the male experience in each of the ten areas dealt with by me.

11. The mean in each age group, relative to a total of 100,000 of the population for each area corrected for migration in certain cases as explained above, was summed from the bottom upwards to produce the population aged 0 and upwards, 5 and upwards, etc. These were denoted by the respective symbols T_0, T_5, T_{10}, etc., to T_{70}. Corresponding sums for the standard Table adopted were denoted by the symbols T_0', T_5' T_{10}', etc., to T'_{70}. The ratio $\frac{T}{T'}$ was made the subject of graduation. A cubical parabola given by the equation $y=1+ax+bx^2+cx^3$ was fitted to the observed ratios of $\frac{T}{T'}$ in each case. It is not necessary to go fully into the technical details of this process of graduation. I desire, however, to state that I have found the process of fitting a curve by the method of "Least Squares" particularly suitable not only for its easy application but also for the facility this method afforded for discarding the ratio at any age if due to gross mis-statement in age it was found to be entirely undependable. The graduated ratio multiplied by the population according to the standard at any age yielded the graduated mean population at that age.

Rates of increase.

"*A Nation ought to devote its best energies to the self-imposed task of carrying out in its manifold details the following general programme :—*

(*i*) *of steadily raising the natural level of successive generations, Morally, Physically and Intellectually by every reasonable means,*

(*ii*) *of keeping its Numbers within approximate limits,*

(*iii*) *of developing the Health and Vigour of the people. In short, to make every individual efficient both through Nature and by Nurture.*"

FRANCIS GALTON.

12. To deduce, from the graduated mean population obtained by processes explained in the last few paragraphs of this section, the fundamental column of the mortality Table showing the number of survivors at each age out of a fixed number of births, say, 100,000, it is necessary to determine the average rate of increase of the population in each of the various Provincial groups during the period taken into account which in the present case is the decennium 1921-1931. The following Tables taken mainly from Mr. Marten's Report for 1921 show the average rate of increase, both real and actual (the latter based on Census figures only), in each decennial period since the first general Census of India in 1872.

TABLE XXII.

Census of	Population.	Variation per cent. since previous Census.
1872	206,162,360	..
1881	253,896,330	+23·2
1891	287,314,671	+13·2
1901	294,361,056	+2·5
1911	315,156,396	+7·1
1921	318,942,480	+1·2
1931	352,837,778	+10·6

TABLE XXIII.

Period.	Increase due to: Inclusion of new areas.	Increase due to: Improvement of method.	Real increase of population.	Total.	Rate per cent. of real increase.
(1)	(2)	(3)	(4)	(5)	(6)
	Millions.	Millions.	Millions.	Millions.	
1872-1881	33·0	12·0	3·0	48·0	1·5
1881-1891	5·7	3·5	24·3	33·5	9·6
1891-1901	2·7	·2	4·1	7·0	1·4
1901-1911	1·8	..	18·7	20·5	6·4
1911-1921	·1	..	3·7	3·8	1·2
1921-1931	..	..	..	..	10·6

13. The rates of increase shown in Table XXII are not of any practical interest as they have been coloured substantially by artificial increases due to inclusion of new areas and to progressive increase in the accuracy of the enumeration from Census to Census.

14. It will be seen that the real rate of increase has been the largest in the decennium 1921-1931 of all the periods. It may not be out of place at this stage to make some observations as to the desirability or otherwise of the very large rate of increase in the population which the decennium has witnessed, applied particularly to this country where the standard of living is proverbially low. Otherwise, the poignant words of Francis Galton, inscribed in bold characters on the walls of the Biometric Laboratory of University College, London, by Galton's worthy and famous disciple Prof. Karl Pearson and quoted at the beginning of this topic, would be irrelevant.

15. The rate of increase of the population has always remained a matter of absorbing interest during the one hundred and thirty-five years since Malthus in his *Essay on Principle of Population* expressed real alarm at the rapid rate at which population was increasing and presented a very vivid and horrid picture of the results of indiscriminate multiplication. He enunciated a law which in mathematical language can be stated thus: If the population of a confined area increases in geometrical progression, while the food production increases only in an arithmetical progression, the former must inevitably overtake and surpass the latter and within a short period there will be several people without any food. A few sentences may be quoted from Malthus ' Essay in illustration of his graphic description :—

" The population of the island (Great Britain) is computed to be about 7 millions and we will suppose the present produce equal to the support of such a number. In the first 25 years the population would be 14 millions and the food being also doubled, the means of subsistence would be equal to the increase. In the next 25 years the population would be 28 millions and the means of subsistence only equal to the support of 21 millions. In the next period the population would be 56 millions and the means of subsistence just sufficient for half that number. And at the conclusion of the first century the population would be 112 millions and the means of subsistence just only equal to the support of 35 millions which would leave a population of 77 millions totally unprovided for."

16. Malthus has been the subject of a certain amount of criticism on the score of having depicted too horrid and too gruesome a picture. He might have indulged in a little bit of exaggeration of which he should have been quite conscious. It should, however, be remembered that he was practically the pioneer amongst the great thinkers of the world who directed their attention to this great problem relating to population and its increase. Just as in the realm of Literature a Tragedy is considered to inculcate a moral better than a Comedy, so also, in this case, Malthus having felt himself to be in the role of a teacher of the moral regarding population and its uncontrolled growth had to depict a shocking picture to impress on the imagination of the public the consequences if the moral was disobeyed. He has also been criticised for making the starving millions breed and multiply in each period. The surplus population would not be straightaway wiped out but the immediate effect of population overtaking the means of subsistence would be a fall in the standard of living for the majority in the area which would give an impetus to indiscriminate multiplication making the standard of living fall still lower thereby completing what is called the vicious circle, of which India provides a good example. That birth rate is very highly and inversely correlated with status in the social scale, that is, with the standard of living, is illustrated by the following Table relating to England and Wales appearing in Mr. Carr-Saunders' book on Population.

TABLE XXIV.

The number of births in the year 1911 per 1,000 married men under 55 years of age in England and Wales grouped according to the occupation of the father.

Occupation of the father.	Number of births.
(1) Upper and middle classes	119
(2) Intermediate	132
(3) Skilled workmen	153
(4) Intermediate	158
(5) Unskilled workmen	213

17. Let us now examine the truth of the Malthusian proposition enunciated at the end of paragraph 15.

Let r be the common ratio of the geometrical progression in which population is increasing.

If P_0 be the population in the area under consideration at the commencement of an epoch and P_t the population at time t measured from the beginning of the epoch we shall have $\frac{dP_t}{dt}=P_t r$, giving $\frac{1}{P_t}\frac{dP_t}{dt}=r$ or $\frac{d \log P_t}{dt}=r$ leading to $\log P_t = rt + \text{constant}$, or $P_t = P_0 e^{rt}$ since when $t=0$, $P_t=P_0$. Therefore the population at any time t measured in years is $P_0 e^{rt}$.

If the means of subsistence increase in an arithmetical progression at a rate K times the rate at which the population is increasing so that the common difference of the arithmetical progression of increase of foodstuffs and other necessaries of life is Kr, we shall, on the supposition that the available amount of the necessaries of life at the commencement of the epoch was just sufficient to support the population then existing in the area, *viz.*, P_0, obtain for the number of people which the resources of the area then available can support at the end of time t the quantity $P_0(1+Krt)$. If on Malthus' assumption the population, increasing in geometrical progression, were to overtake the means of subsistence increasing in an arithmetical progression, though at a rate several times larger than the rate at which the population is increasing, we should have a value of t satisfying the equality

$$P_0 e^{rt} = P_0(1+Krt)$$

$$\text{or } 1+rt+\frac{r^2t^2}{2}+\frac{r^3t^3}{2\cdot 3}+\ldots\ldots\ldots\ldots = 1+Krt \qquad \text{(A)}.$$

The values of t given by the equation (A) give the period at the end of which population would overtake means of subsistence and there would subsequently result a shortage of food. One value of t is 0 corresponding to the commencement of the epoch, when the assumption was made that population had just sufficient for subsistence. Another value of t, if one exists, would give the critical number of years at the end of which the food problem in the community would come to tell. Practical values of r are never greater than ·03. Only undeveloped countries like Canada and New Zealand show anything near this rate. Even for Australia the value of r is about ·02. For all practical values of r and practical values of K (the number of times food supply exceeds the needs of population) it is possible to find value of t by a process of successive approximation so well known to students of Actuarial Science. The values of t, the number of years at the end of which the population would overtake the food supply for practical values of r and K, have been called "Malthusian equivalent intervals". These values have been calculated by Mr. G. H. Knibbs and are exhibited in the following Table.

TABLE XXV.

Malthusian equivalent intervals corresponding to various rates of increase.

Number of times food supply exceeds needs of population.	Number of years (t) before population overtakes food-supply, the former increasing in a geometrical progression of ratio r and the latter in an arithmetical progression of common difference Kr.			
K	$r=0\cdot01$	$r=0\cdot015$	$r=0\cdot02$	$r=0\cdot03$
2	126	84	63	42
4	234	156	117	78
8	332	221	166	111
16	423	282	211	141

18. The annual rate of increase of population in India which the decennium under consideration has engendered is very nearly 1%. The above Table shows that if population continues to increase at this rate and if the food supply were to increase at double this rate, *i.e.*, at 2% (on the supposition that the present food supply in India is just sufficient for supporting the present population, which is far from being the case), food shortage would come to tell at the end of 126 years.

If food supply increases at 4% while population increases only at 1% the critical period will be reached at the end of 234 years. For 8 and 16 per cent. increases in food supply, population and food supply will attain equality at the end of 332 and 423 years respectively. These are small as compared with historical and geological periods. Thus the truth of the Malthusian proposition is established beyond doubt.

19. The adage "Population begets Population" naturally points at a geometrical progression as the law governing the rate of increase of population. If, however, we proceed on this assumption, we are faced with incongruous results. Mr. Knibbs, several times referred to by me, has computed the average rate of increase of the population of the world weighted according to the population of each country during the quinquennium 1906-1911 to be 1·159 per cent. per annum. The largest annual rate of increase of 2·98% was shown by Canada. Ireland was the only one of all the countries that indicated an annual rate of decrease of ·006%. Amongst countries that showed an increase, France exhibited the lowest rate per annum being ·016%. Referring to the average rate of increase of the population of the world of 1·159% per annum, Mr. Knibbs has some very interesting observations to make which I am quoting *in extenso* :—

"Either this rate of increase must be enormously greater than has existed in the past history of the world or enormous numbers of human beings must have been blotted out by catastrophes of various kinds from time to time. For, putting the present population (of the world) at 1,649,000,000 at the average rate of increase, this number would be produced from a single pair of human beings in about 1,782 years, that is to say, since A. D. 132 or since Salvius Julianus revised under Hardian the Edicts of the Praetors. Even the rate given by the world-populations 1804 and 1914, *viz.*, (0·0086) gives only 2,397 years, carrying us back to only B. C. 483, or since the days of Darius I of Persia.

"The profound significance of this fact, accentuated also by the extraordinary increase in the length of life (expectation of life at age 0) which has revealed itself of recent years, is obvious when the correlative food requirements are taken into account. The resources of Nature will have to be exploited in the future more successfully than in the past to maintain this rate of increase (0·01159) which doubles the population every 60·15 years and would give for 10,000 years the colossal number 22,184 with 46 noughts (10^{46}) after it.

"This number is so colossal that it is difficult to appreciate its magnitude. Assuming the earth to be a globe of 3,960 miles radius, of a density 5·527 compared with water, that water weighs about 62½ lbs. per cubic foot, and that a human being weighs on the average, say, 100 lbs. (7 st. 2 lbs.) the actual mass of the earth would be equivalent only to say, $132,265 \times 10^{18}$ persons; that is, it would require $16,771 \times 10^{23}$ times as much "matter" as there is in the earth. Or, to consider it as a question of surface, allowing 1½ square feet per person, the earth's entire surface area would provide standing room for only $36,625 \times 10^{11}$ persons. That is, the population would be $60,570 \times 10^{30}$ times as great as there would be standing room if the whole earth's surface were available. It is evident from this that the rate of increase of human beings must have been more approximate to the rate for France at the present time if the earth has been peopled for 10,000 years: the French rate, 0·0016, would require 12,842 years to give the present population from a single pair. This rate, however, would give a population of only 17·55 millions in 10,000 years.

"The foregoing analysis of the effect of the rate of increase, with which we are familiar, established the fact that the rate must have passed through great changes, and could not have been maintained for any long period, either at its present average, or that characteristic of the last century. It is not improbable that the rate of the last quinquennium will not be long maintained; and it is certain that however great human genius or effort may be, in enlarging the world's food supplies, that rate cannot possibly be maintained for many centuries. The contention of Malthus is thus placed beyond question, from a different point of view."

20. From the above vivid description, it will be evident that the power of population just as the power of compound interest over a period measured in centuries is just as to shock the imagination. While solving problems in compound interest, how many of us did not regret the fact that a great-great-grandparent of ours of a couple of centuries back did not invest a few rupees at a small rate of interest, compounding annually, so as to amount to several lakhs for our present use. With increasing experience, however, we realize that in the realm of practical finance this is an absurdity. Similarly it is absurd to try to forecast the population in a given area, say, a thousand years hence, on the basis that the present rate of increase will continue to progress in a geometrical ratio. Correcting factors will

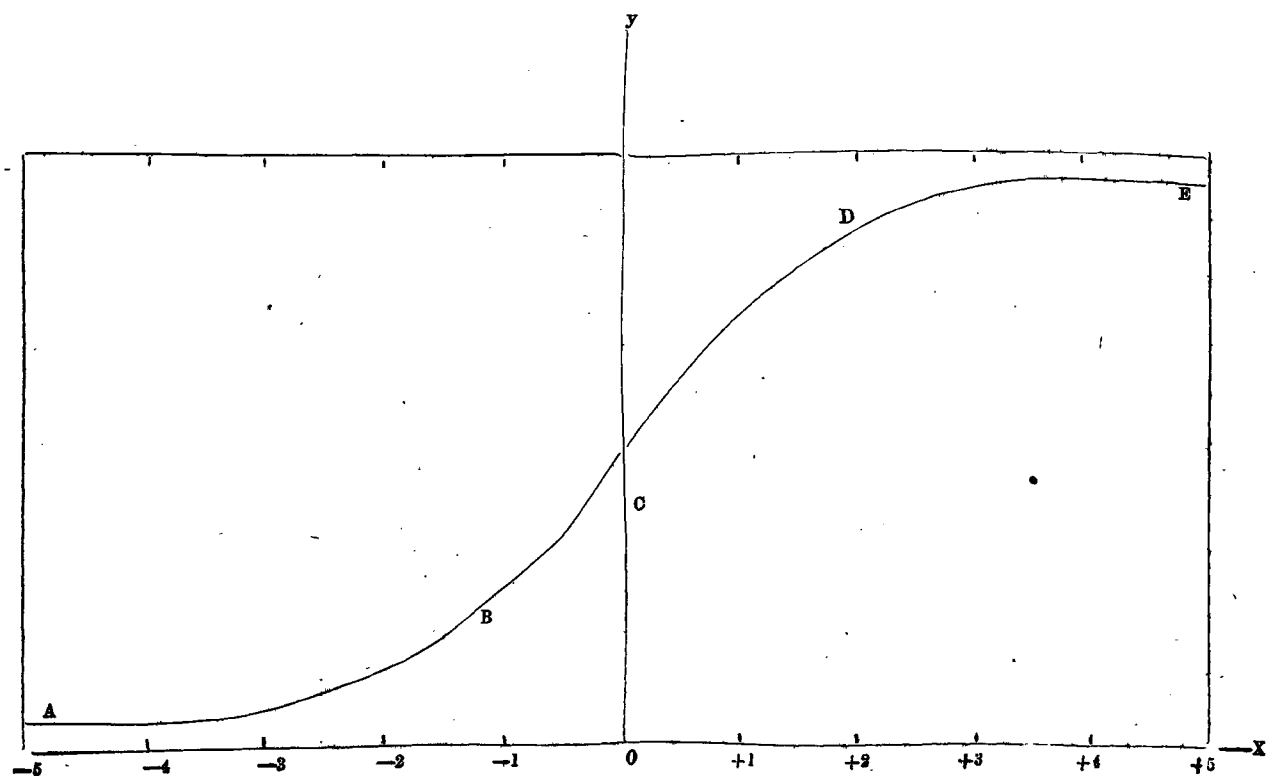
be at work to keep down the rate of growth. Malthus indulged purposely in some exaggeration when he omitted to make mention of the correcting factors.

21. If geometrical progression is to be ruled out, the question might naturally be asked as to what the law underlying population growth is. Quetelet's brilliant analogy between the growth of population and the motion of a body through a resisting medium suggests a rational solution. In the case of such a body when the velocity is small, the force to impede the velocity is also small. As the velocity increases, the resistance also increases till the body cannot move in the medium at a velocity greater than a particular one, called the limiting velocity, whatever may be the magnitude of the force acting on the body making it move forward. Similarly, when the resources of a country and the amount of space available are large as compared to the population, very little impediment will be felt to the growth of population and it may actually increase at a rate approximating to the geometric progression. As density increases, and as the ratio of the undeveloped resources of the area to the population diminishes, the rate of growth will be arrested and will slowly diminish, attaining the value 0 when the population in the area will attain a stationary or constant value beyond which it cannot increase.

22. To evolve a mathematical formula for the law of population growth on the above analogy was, however, left first to Verhulst and then, quite independently of him, to Pearl and Reed. It is not necessary to give in detail here the mathematical processes by which the equation to the curve of population growth is obtained. The reader is referred to either "Studies in Human Biology" by R. Pearl or to the Presidential address delivered by Mr. G. Udny Yule before the Royal Statistical Society and appearing in Volume 88 of the Journal of that body.

23. The rate per unit of time at which the population in a given area increases at any moment depends upon the absolute magnitude of the population in the area at that moment subject to a retarding influence or, in mathematical language, a reducing factor depending on the difference between the maximum population which the area can support and the population at that moment. This leads to a differential equation for the law of population growth of the form $\frac{dy}{dt} = \frac{y}{\alpha}(1 - \frac{y}{L})$ which when solved leads to the equation, $y = \dfrac{L}{1 + e^{\frac{\beta - \alpha}{t}}}$ ——————— (B)

where y is the population at any time t and L is the limiting value of the population which is approached when t becomes infinitely great. The form of the curve given by equation (B) representing a rational law of population growth is given by the accompanying diagram.



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Time is measured along the X axis and the population along the Y axis. The part ABC of the curve of population growth is convex to the X axis (the axis of time) showing that in this section the increase of population in any year is larger than in the preceding year. Up to the point C corresponding to time β, the density of population in the area is not very large and the impediment to growth of population is not very intense. When the population already existing in the area is small compared with the limiting population L, we can prove that the rate of increase in the population is very nearly in a geometrical progression. For, in the differential equation to the curve, namely, $\frac{1}{y}\frac{dy}{dt}=\frac{1}{\alpha}(1-\frac{y}{L})$ by making y very small as compared with L we obtain the simplified equation $\frac{1}{y}\frac{dy}{dt}=\frac{1}{\alpha}$ or $y=Ae^{t/\alpha}$ which is the same as a logarithmic curve, or the curve of a geometrical progression.

24. At the point C, the density of population in the area is one-half the limiting density and this is a point of inflexion at which the curve changes from convexity to concavity. Over the section CDE of the curve the increase of population in any year is smaller than in the preceding one and goes on diminishing from year to year till the increase vanishes and the population attains a limiting value based on the area available for occupation and the capacity of the area to provide means of subsistence. That this curve for the law of population growth very nearly fits in with the observed facts with respect to several countries has been proved by Messrs. Yule and Pearl in the Papers by these authors referred to above.

25. It appears, from the above analysis, it is reasonable to assume that in those countries such as for instance Canada, Australia, etc., where the available resources are not fully mobilized and the density is small as compared with the area fit for human habitation, population would continue to increase very nearly in conformity with the law "Population begets Population", that is, in a geometrical progression. That this rate of increase will in course of time be compelled to slow down by such methods as modern civilization would tolerate and vanish when the population would attain its limiting value appears to be the only rational assumption.

26. In those countries, where the level of education is high, this final or limiting value of the population will be reached by a voluntary and deliberate limitation of the birth-rate which will bring as a natural reward a fall in the death-rate thereby minimising misery. That most of the countries in Europe did substantially restrict the size of their families is proved with all the force of statistical analysis. The fall in the French birth-rate is proverbial. In England the fall practically synchronised with the famous Bradlaugh Case (1877) which served to attract with an extraordinary force public interest to a pamphlet giving information on birth-control written by Dr. Knowlton of which Bradlaugh and Mrs. Besant were the publishers. The Germans were rather late in taking interest in the subject. But when once they did they were systematic and thorough and flooded their country with literature on the subject. The fall in the German birth-rate in the years just before the Great War was phenomenal.

27. In other countries, of which India is a good example, where due to lack of imagination which education inculcates and the consequent *laissez faire* attitude of the people towards matters of vital importance, actions are not intelligently directed towards safeguarding the happiness of the future, but by adopting a policy of drift pinning faith on the proverb "with every mouth God sends a pair of hands" the limiting population will be reached by a high birth-rate bringing in its trail a high death-rate and the inevitable physical and mental suffering which a high death-rate would naturally entail. The following Table comparing England and Wales and India over a quinquennium shows that in England and Wales where the birth-rate is low, due to a larger fall in death rate, the survival rate is really larger than in India where the effect of a larger birth-rate is neutralized by a heavy death rate.

TABLE XXVI.

Year.	England and Wales.			British India.		
	Birth-rate.	Death-rate.	Survival rate.	Birth-rate.	Death-rate.	Survival rate.
1910	25	13	12	40	33	7
1911	24	14·5	9·5	39	32	7
1912	24	13	11	39	30	9
1913	24	14	10	39	29	10
1914	24	14	10	40	30	10

28. The statistics relating to most other countries of Western Europe go to confirm what was observed with respect to England and Wales, that the fall in the birth-rate synchronised with a larger fall in the death-rate as the following Table taken from the journal of the Royal Statistical Society, Volume 88, page 33, clearly indicates.

TABLE XXVII.

Decreases in the death-rate and the birth-rate between 1871-80 and 1901-10 in certain States of Western Europe : points per 1,000 of the population.

Country or State.	Fall in.	
	Death-rate.	Birth-rate.
1. Hamburg	11·5	12·2
2. Wurtemburg	11·3	10·3
3. Saxony	10·8	10·8
4. Bavaria	9·2	5·9
5. Netherlands	9·2	5·7
6. Baden	8·3	5·8
7. Prussia	8·2	5·5
8. Austria	8·2	4·3
9. Hesse	8·0	5·9
10. Alsace-Lorraine	7·9	5·4
11. Belgium	6·4	6·2
12. England and Wales	6·0	8·2
13. Denmark	5·2	2·8
14. Scotland	5·0	6·5
15. Finland	4·0	5·8
16. Sweden	3·4	4·7
17. Norway	2·8	3·6
18. Italy	2·6	2·3
19. Switzerland	2·3	3·8

29. Those countries that restrict their birth-rate help Nature in her task of keeping the numbers within the bounds of the capacity of the area, while others that allow the birth-rate to soar high will have to pay large penalties in the shape of heavy death rates, for Nature is a relentless task-mistress and will always have her own way.

30. One can judge whether or not a country is suffering from the effects of over-population by the standard of living obtaining in the country as economists

hold that low standard of living is a sure index of over-population. When the number of mouths is considerably larger than the capacity of the soil to provide food for them, the standard of living should naturally fall. Let me quote from what Carr-Saunders says in this connection with particular reference to India and China.

"Infanticide was employed in India and China until recently; it has now been abandoned and no other method of keeping the size of the families small has taken its place. An examination of the social conditions suggests that the people are not living as well as they might; famines are not uncommon and are never far off. The symptoms point to over-population, of which the cause would seem to be the failure to replace the custom of infanticide by some other method of regulation."

31. No greater proof is required of the fact that what primarily ails India is over-population than the low, miserably low, standard of living of the masses. This would indicate that the actual position of the Indian population in the Logistic curve of population growth given in page 147 is in the section CDE of the curve, possibly very near E round about which point, if Nature's Law is to be obeyed, any further increase in the population should be practically nil. In other words, there should be, very nearly, only as many babies born as there is wastage due to deaths. To subject the soil to increased pressure due to the addition of nearly 34 millions in a decade when the standard of living is proverbially low is a situation that should cause real alarm in the minds of well-wishers of India. Without an addition in real wealth of, at least, the same extent, of which there has been no very large indication, the existing low standard of living is sure to be depressed further, leading, as has already been indicated, to further over-population and consequent increase in the loss of the spirit of enterprise. For, successive generations of life on less than bare margin of subsistence and the natural indolence and despondency which such a state engenders have probably made the majority of Indians abstain from making any strenuous effort to raise their standard of living, which could be achieved in the first instance by limiting the size of the families. Being itself both the cause and effect of over-population the low standard of living of the average Indian completes what is called the "vicious circle".

32. That the primary cause of the abnormally heavy mortality experienced by the masses in India is traceable to very low economic status is illustrated by the difference between the rates of mortality and the expectations of life relating to males between the experience of the Oriental Government Security Life Assurance Company embracing the period of two decades 1905-1925 and those of the male population of India ascertained after the 1931 Census as clearly shown by fhe following Table :—

TABLE XXVIII.

Age.	Oriental—Males Ultimate 1905-1925.		All India Males 1931.	
	Mortality per cent.	Mean after life-time.	Mortality per-cent.	Mean after life-time.
20	·725	37·16	1·27	29·57
25	·817	33·53	1·53	26·50
30	·887	29·89	1·93	23·60
35	1·001	26·22	2·41	20·99
40	1·263	22·58	2·94	18·60
45	1·743	19·11	3·49	16·40
50	2·513	15·95	4·10	14·31
55	3·663	13·18	4·81	12·27
60	5·097	10·86	5·79	10·25
65	6·685	8·88	7·27	8·26
70	8·643	7·15	9·76	6·35
75	11·254	5·60	14·27	4·61
80	15·145	4·25	21·80	3·13
85	20·351	3·12	36·08	1·95
90	26·890	2·14	57·70	1·12
95	54·300	·48	..	..

33. It need hardly be stated that the economic status of the policy holders of the Oriental must necessarily be much higher than that of the general population in India. The rates of mortality of the latter are more than 100 per cent. heavier up to the middle age of life than those of the former. The low economic status of the masses in India is firstly the direct cause of heavier mortality through under-nourishment and secondly it helps to maintain mortality at a very high level by depressing the standard of living which brings about a very large increase both in birth and death rates.

34. The remedy, in short, lies in Birth Control among families of poor economic status. In the Census Report for Mysore State, just to hand, one is pleased to find the following sentence: "By an order issued a year ago Government instituted in the Maternity Hospital at Bangalore a Birth-Control clinic for advice and supply of contraception appliances to married women who, for reasons of health or household economy, wish to restrict conception." India's primary need is the opening of several centres of the type of the Bangalore Birth-Control Clinic covering its entire area. If this is done, the second in rank amongst the three self-imposed tasks which, according to Galton, a nation ought to devote its best energies to will be directly achieved and, as a by-product, the other two will naturally follow.

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35. The populations returned at the two Censuses, after having been corrected for migration in the cases of certain Provincial groups, as explained above, were compared in decennial age groups 0-9, 10-19, etc., and rates of increase of the population applicable to each of these groups were obtained. The logarithms of the rates of increase ($\log r_x$) were made the subject of graduation. The graduating curve was in this case also a cubical parabola and the process of fitting the curve was, as in the case of the graduation of the population, the method of "Least Squares".

36. In this manner were obtained the graduated values of r_x (the rate of increase at age x) in each Provincial group. The graduated population L_x at age x multiplied into $r_x^{\frac{1}{20}}$ (that is, $r_x^{\frac{1}{20}} L_x$) gave the population that would have been returned had a Census been taken six months posterior to middle date of the decennium. Similarly $r_x^{-\frac{1}{20}} L_x$ gave the population on a date six months anterior to the middle date of the decennium. The values of $p_{x+\frac{1}{2}}$ (the probability of surviving one year at age $x+\frac{1}{2}$) were obtained from the ratio $\frac{r_{x+1}^{\frac{1}{20}} L_{x+1}}{r_x^{-\frac{1}{20}} L_x}$ from which the values of p_x and q_x were obtained. The methods adopted for obtaining the rates of mortality q_x relating to females were identical with those adopted in the case of the males, except that to allow for the mortality correction above referred to and for the standard Table made use of in the graduation corresponding female Tables of the 1911 Census were adopted.

37. The method detailed above yielded the rates of mortality from age 1 onwards to the end of life in each Provincial group. The important problem of allotting a value to the rate of mortality at age 0 (q_0) remained. Sir George Hardy graduated the Proclaimed Clans figures available for infantile ages up to 12 for the years from 1876 to 1891 by a formula of the type

$$l_x = A + Hx + Bc^x + \frac{m}{n\,x+1} \text{ ——— } (1).$$

Students of Actuarial Science will easily see that according to Makeham's modification of Gompertz's law for the Force of Mortality the following equality holds :—

$$\log l_x = A + Hx + Bc^x \text{ ——— } (2).$$

Sir George, evidently, made two modifications to the Makeham formula. Firstly he dealt with l_x instead of $\log l_x$. This appears to have been adopted mainly for the facility the l_x form gave to obtain the values of L_x (the population at each age) at the young ages by integration and not from the more easy and approximate formula $L_x = \frac{l_x + l_{x+1}}{2}$ applicable to adult ages which due to the rapid fluctuation of mortality rates at the ages of infancy and childhood is inapplicable at these ages. The principle of "uniform seniority" which is obeyed by the formula when $\log l_x$ is equated to the right-hand side of equation (2) will naturally be sacri-

ficed when l_x is equated to the same quantity. This is immaterial while constructing mortality Tables not mainly intended for financial operations and even if they are, the sacrifice of the conveniences derived from this principle at the very young ages is not of any consequence. The second modification made by Sir George was the addition of the term $\frac{m}{nx+1}$ to provide for the higher mortality and the consequent faster decrement of the numbers surviving to each age at the infantile ages and ages of childhood as compared with the adult ages. This term has its maximum value at age 0 and diminishes rapidly as age increases.

38. The rate of mortality at age 0 (q_0) of Burma males was first obtained as follows :—From the graduated values of q_1, q_2, q_3, q_4, etc., the fundamental column of the mortality Table showing the numbers surviving to each age up to 4 (l_2, l_3, l_4,) out of a fixed number, commencing age 1 (l_1) were calculated. The values of the constants appearing in equation (1) were obtained from these values of l. The resulting equation took the following form :—

$$l_x = 97191 \cdot 335 - 1762 \cdot 505x + 30178 \cdot 684\ (\cdot 45)^x + \frac{13488 \cdot 550}{29 \cdot 8125x + 1} \text{ ——— (3).}$$

39. Having found the value of l_0 from equation (3) the constants in this equation were proportionately reduced so as to make $l_0 = 100{,}000$, the usual convenient radix of a mortality Table. The modified equation is given below.

$$l_x = 68999 \cdot 235 - 1251 \cdot 259x + 21424 \cdot 812\ (\cdot 45)^x + \frac{9575 \cdot 953}{29 \cdot 8125x + 1} \text{ ——— (4).}$$

The resulting value of the function l_x at the young ages provided the value of q_0 for Burma and the values of this quantity for the other Provincial groups were obtained graphically using the values for Burma for the first five ages as base.

40. For constructing the mortality Table for each sex relating to the whole of India, an average age distribution applicable to each of the two Censuses 1921 and 1931 out of a total of 100,000 in each sex was obtained by weighting the numbers in each age group in each area by the total population in that area taken to the nearest million. Having thus obtained the age distribution in each Census, applicable to the whole of India out of a total of 100,000 in the usual quinary age groups 0-4, 5-9, etc., the construction of the mortality Table followed identically on the lines of the method adopted for each Provincial group.

41. The mortality Tables for each sex and for each Provincial group including those for All-India, constructed by methods detailed above, are given in pages 173—194 and called A, B, C, etc., to V.

Explanation of the Columns of the Mortality Table.

42. It is usual to say a few words at this stage explaining the fundamental columns of the mortality Table. The column, headed "Living at age x", usually denoted by the symbol l_x, represents the number of persons alive at the beginning of each age interval out of 100,000 persons born alive. The words "born alive" are used with the view to call attention to the fact that still-births are excluded and the column refers only to survivors of living births. It should also be particularly noted that the meaning of the heading "Living at age x" is living at the beginning of the age interval x to $x+1$, that is, at the precise moment of completing the integral number of years of age x. It may also be added that the 100,000 persons under observation from birth are not assumed as having been born at the same moment. The main point to be stressed is that the flow of lives from age to age in this column is based on the assumption that every one of the 100,000 births is kept under observation from the moment of birth and a regular record is maintained as to how many are alive at exact age one year, how many at exact age two years, and so on to the end of life. The total number counted as alive at exact age one year is entered opposite to age 1 in this column and so on for other ages. This is the fundamental column of the mortality Table and shows the decrement of life from age to age throughout the whole range of life. Taking, for example, Table A, relating to All-India Males, we see that out of 100,000 chil-

dren born alive only 52,439 attain age 18, the age of majority in India. The original number is reduced to one half at about age 21½. The proverbial "threescore and ten years" is attained only by 7,036 out of every 100,000 born.

43. The next column 3 headed "Dying between ages x and $x+1$" shows the number dying after attaining the age shown in column 1 but before attaining the next higher age out of 100,000 persons born alive. It is merely the decrement of the numbers in column 2 and is obtained by taking the difference between successive numbers in that column. The number of deaths, very high for the age interval 0 to 1, diminishes rapidly till about age 10, 11 or 12 (there being minor variation from Province to Province) which is the most favourable period in life. From this point onwards the number of deaths increases till it attains a maximum more or less in the neighbourhood of age 40 for males and then slowly tails off to zero. In countries where the rates of mortality till about middle age are not so heavy as in India this maximum appears much later in life, that is, after age 70. Since this column indicates the number of deaths occurring in each age interval amongst a diminishing number of persons alive at the beginning of that age interval, it cannot give an adequate idea of the rate of mortality at each age. This is however given by the next column.

44. The next column headed "Mortality per cent." shows the number dying in each age interval among 100 alive at the beginning of the interval. Just as in the case of the preceding column relating to the number dying between the ages x and $x+1$ the mortality per cent. which is very large for age 0 rapidly diminishes to age 11 or 12. From this point onwards it increases slowly at first and more rapidly from and after age 50 and towards the end of the Table the rate of increase is extremely rapid.

45. Column 5 with the heading "Living between ages x and $x+1$" has to be particularly distinguished from column 2 headed "Living at age x". It might be of interest here to mention that the Life Table or mortality Table under explanation shows the number of persons surviving to each year of age and the number of persons dying between two consecutive integral ages in a *stationary population* undisturbed by migration and where only as many are born as die during the year in all the age periods. In other words, in the construction of the mortality Table, disturbances due to migration and irregular flow of births and deaths from year to year over the period considered are eliminated and rates of mortality obtained as applicable to the population when freed from these disturbing influences. This column shows the number of persons that would have been enumerated at each age last birthday in a stationary population supported by 100,000 births had a Census been taken at any moment during the year. In other words, the total number opposite to age 25, say, is the population between ages 25 and 26 at all fractional ages between these two integral ones.

46. The number in column 6 recorded opposite to any age shows the total population that would have been returned as of that age and all older ages to the end of the Table at a Census taken at any time. It is obtained by adding the population in the preceding column from the current age to the end of the Table. The number in this column opposite to age 0 represents the total population maintained by 100,000 births per annum in a community subject to the rates of mortality given in column 4. This column is of particular interest in so far as it enables two countries or two communities subject to different rates of mortality to be compared as regards their age distribution. Due to the heavy rates of mortality to which Indian population is subject, we find on reference, for instance, to the All-India Male Table A that about half the population is under age 24 and the other half aged 24 and above and only about a quarter of the population lives aged 40 and above, whereas, in countries subject to lighter rates of mortality these proportions occur at ages substantially later. For instance, in the United States of America (1910 experience) half the population is over 31 years of age and about one-fourth over age 50. The corresponding ages for England and Wales (1911 experience) are 33 and 51. The numbers appearing in this column can also be interpreted in another way. The number appearing, for instance, opposite to age 25 not only represents, as explained above, the total population aged 25 and upwards but also the total number of years of future life-time that would be lived by those alive at the beginning of age 25 given in column 2, namely, 47,787.

47. The next and the last column headed " Mean after life-time at age x " is also commonly known as the " expectation of life ". Being, as is more or less explained by the heading itself, the mean or average future life-time lived by all persons attaining a particular age x, the number in this column opposite to any age, on the basis of the explanation given towards the end of the last paragraph, is obtained by dividing the number in column 6 by the number in column 2 appearing opposite to the same age. This expression " expectation of life " is associated in public minds with not a little confusion due to the unfortunate choice of the word " expectation " which has however come to stay. It is much better to call it " mean after life-time " or " average after life-time ". People usually consider the expectation of life at any age to represent the number of years any individual of that age may " reasonably expect " still to live. This is, however, not the case. Given a large number of individuals, say, aged 30 not chosen by any selective process, we shall find persons in all states of health. The expectation of life at age 30 means only the average life-time lived by all persons of that age in the future, some living very long and others having only a short span of life. In the process of averaging we take the excess from those who live long and distribute it among those who die early, so as to place all on an equality. As applied, therefore, to any particular individual, the expectation of life has no significance whatsoever. If he is in a very bad state of health his future life-time may be far shorter and if he be in sound health it may be far longer than the expectation of life. The chief importance of this function lies in the fact that it affords a ready means of comparing two mortality Tables for the cumulative effect of mortality at all ages above any particular age.

Comparisons.

48. It will be essential before concluding the Report to compare the results arrived at by my investigations with the earlier ones. Before, however, this is done, it is necessary to stress that a few important points should be borne in mind. The essential difference between my investigation and those of my predecessors is traceable to the fact that, whereas I included in each area the British Province and the adjoining Feudatory Indian States, their investigations were confined to British Provinces only. A certain amount, therefore, of the difference between the rates of mortality as deduced by me and by my predecessors with respect to each Provincial group can, naturally, be traced to the variations in the areas dealt with. In the absence of mortality Tables constructed separately relating to the larger Indian States, it will not be possible to say how far their inclusion has tended either to increase or diminish the aggregate mortality of the respective British Province with which each of them has been grouped. It was, however, felt that the vitality of the Indian Empire should be appraised in suitable geographical groups without omitting any area and on the Census Commissioner expressing his opinion in favour of this procedure, I agreed very gladly to conduct my investigations on these lines as I was also very strongly in favour of adopting this course.

49. Another point to bear in mind, when comparing the mortality of the same Province in two different Censuses, is the fact that the rates of mortality may appear as having improved, whereas they may have deteriorated, due to improved efficiency in methods of Census enumeration showing artificially a very large increase. In illustration of this point I have only to refer to Tables XXIX and XXX showing the rates of mortality and Tables XXXI and XXXII showing expectations, of life for males and females respectively in the Provincial group, Central Provinces and Hyderabad. By referring to either of these Tables, it will be evident that the mortality in this area is considerably superior in 1931 as compared with what it was in 1881. The Hyderabad State has returned at the 1931 Census a total population which is nearly $15\frac{3}{4}\%$ in excess of the population returned at the 1921 Census, whereas the rate of increase for the whole of India is only about $10\frac{1}{2}$ per cent. The very large increase in the population, shown by the Hyderabad State at the 1931 Census, has been attributed by the Census Commissioner to increased efficiency of the Census staff and there can be no other convincing explanation. Since the rates of mortality depend on the rates of increase, the very large increase in population shown by the Hyderabad State should have lightened significantly the mortality rates relating to the Central Provinces, Berar and Hyderabad group. A substantial part, therefore, of the improvement in vitality shown by the Central Provinces between 1881 and 1931 might be traced to this cause.

50. There is yet a third point to be borne in mind consequent upon the deduced rates of mortality being to a certain extent sensitive to the methods of graduation adopted both with respect to the population and the rates of increase. With respect to the latter, whether a constant rate of increase at all ages or a variable one from age to age has been adopted (after graduation) also affects the results to a certain extent. Where, however, the collected statistics are subject only to minor errors due to the paucity of the data, different methods of graduation will have very little effect upon the deduced rates of mortality. With respect to the Indian Census Returns, where the errors are of very large magnitude, smoothing formulas of very great power have to be adopted with the result, above mentioned, that the calculated rates of mortality depend to a significant extent upon the smoothing formula or the formula of graduation. This is particularly so at the ages of infancy and childhood where, even in countries which place a substantial reliance on the statistics at the other ages, help has to be derived from the records of births and deaths to correct irregularities relating to them. We are without any guide whatsoever in India with respect to the flow of vital occurrences at the very young ages. The only small material on hand is nearly half a century old and therefore quite obsolete for our present purpose. It also refers only to a limited area which, as compared to the size of the Indian Subcontinent, is entirely unrepresentative of parts distant from itself. All these factors have to be borne in mind before comparisons are effected between either the results of one Province from one Census to another or of one Province with another in the same Census. If, therefore, in effecting comparison on the above lines the differences traced are only very small, it will be unsafe to attach any large significance to them.

51. The task of comparing the results brought out by me with those of my predecessors appears a huge one as I have constructed as many as twenty-two Tables for both the sexes after dividing India and Burma into ten large geographical areas. The mortality Tables corresponding to three of these areas, namely, Bihar and Orissa ; Rajputana, Ajmere-Merwara and the Central India States and Agency group ; Sind, Baluchistan and N. W. F. Province, have been constructed by me for the first time. With respect to these areas, therefore, in the absence of mortality Tables relating to the earlier Censuses, it will not be possible to say in what direction variation in mortality lay. As regards the other Provinces, I propose to draw conclusions relating to the trend of mortality on broad and general lines only.

52. The obvious way of comparing two Tables of mortality either with respect to the same locality at different epochs or of two different localities or communities at the same epoch is to compare the rates of mortality, that is, the numbers appearing in the column headed " Mortality per cent." in the Life Tables A to V. Though this method provides an effective way of comparing the trend of mortality at individual ages without the comparison being vitiated by variations at all other ages between the Tables compared, it suffers from the disadvantage of being too laborious as every age has to be compared individually. Where, therefore, it is considered desirable to eliminate minor fluctuations at individual ages, Tables could be compared in large groups of quinquennial or decennial age periods by computing what is called the probability of dying over 5 or 10 year age periods. Tables XXIX and XXX give for each sex the rates of mortality at all quinquennial age points, 0, 5, 10, etc., in each Province from the 1881 to 1931 Censuses wherever these are available. Though a general tendency may be discerned in the case of some Provinces for the rates of mortality at the adult and older ages to diminish, this is, however, subject to such large fluctuations as to make any statement to this effect devoid of its emphasis. Burma, however, shows itself to have slightly deteriorated even at these ages. A substantial improvement in the rates of mortality at the very young ages is, however, apparent in each Province. It would have been unsafe to place too much reliance on the lighter mortality, exhibited at the young ages as a result of the present analysis, due to the great unreliability of the data relating to these ages but for the fact that the available statistics of deaths pertaining to these ages have gone to confirm this inference. These statistics of deaths are, of course, not dependable but they are no more so now than formerly and, on the supposition that the amount of error has remained constant, there is room for drawing the conclusion that the mortality at the very young ages, notably in the first year after birth, has improved to a certain extent. It would,

therefore, appear that the several Baby-Week Exhibitions and other propaganda relating to the proper bringing-up of children carried on frequently during the last decade have come to bear some fruit. The Nation, therefore, should feel grateful to the organisers of these exhibitions.

53. Another point of great importance which must cause concern to workers in the cause of public welfare, especially in connection with minimising the perils attendant on maternity revealed not only by the 1931 Actuarial Analysis but also by the earlier ones, is the heavier mortality of females as compared with males practically from about age 12 to about age 45. In the other sections of the Table, female mortality is lighter than that of males. It will be of interest in this connection to refer to the rates of mortality of both the sexes with respect to England and Wales given in Tables XXIX and XXX. It will be observed that in England female mortality is, in the major part of the Table, substantially lighter than male mortality and between ages 10 and 15 where female mortality rises relatively to male mortality it only approaches the latter without exceeding it. A reference to the Life-Tables relating to other countries notably the United States of America also indicates that female mortality is throughout lighter than male mortality. The heavier mortality of females as compared with that of males from about the age of adolescence to the age when capacity for child-bearing may be expected to cease appears to be a feature of the mortality experience of Indian females. A considerable part of the heavy mortality of girls in their teens can naturally be traced to immature maternity if correct statistics are maintained according to age and cause of death. That noble piece of Legislation called by the name "Sarda Act" has not been sufficiently long on the Statute Book for its effects to make themselves evident in the decennium considered. The salutary restriction imposed by this Act against the marriage of immature boys and girls combined with increasing knowledge on matters relating to maternity and to pre-natal and post-natal ailments, will, it is hoped, make considerable part of the excess mortality of females at the reproductive ages diminish.

54. Another method of comparing mortality Tables that has been very largely adopted in the past is to compare what has been called "the mean after life-time" which is also commonly known as "the expectation of life" the method of calculation of which from the fundamental column, showing the number of survivors from age to age, of a mortality Table was explained in an earlier paragraph. The chief advantage of this quantity lies in the fact that by its use one is able to compare mortality Tables for the cumulative effect of mortality over its entire length from any given age. For instance, comparing two mortality Tables by their expectations of life, say, at age 25, one would be able to judge which of the two Tables shows in the aggregate lighter mortality from age 25 up to the end of the mortality Table. This method of comparison by expectation of life has, therefore, the advantage of not giving prominence to minor fluctuations in mortality rates at particular ages. Where, however, it is desired to compare mortality Tables over short ranges, the function called temporary expectation of life can be made use of. Tables XXXI and XXXII give the expectations of life for all the Provincial groups from 1881 to 1931 for males and females separately. By comparing the expectation of life at age 0 for two Provinces or for two different Censuses of the same Province, one is able to compare the mortality rates to which the populations of the two Provinces are subject in the former case and the variation in the mortality of the Province from one Census to another in the latter. It need hardly be mentioned that the larger the expectation of life the lighter is the mortality. It will be seen that the expectation of life at age 0 shows a substantial improvement at the 1931 Census over the other four Censuses brought in the comparison excluding that of 1921 with respect to which no expectation of life was calculated. Since the rates of mortality relating to the very young ages in India are not entirely dependable, one would rather be inclined to draw conclusions by eliminating these ages, that is, by comparing the expectation of life at age 5 or preferably age 10.

55. I shall make a few observations relating to the trend of mortality in each Province by comparing the expectations of life at age 10. These observations will be mostly confined to the male Tables. It will however be easy for any one to draw his own conclusions from the experience of female lives from a study of Table XXXII on more or less identical lines. The mortality in the Province of

Bengal does not show any decided tendency to improve substantially. Though the expectation of life at age 10 in 1931 is somewhat larger than in 1901 and in 1911, it is to a certain extent smaller than in 1891 and substantially so as compared with 1881. Bihar and Orissa, which have been dealt with separately in one group for the first time after the 1931 Census, exhibit expectations of life up to age 50 markedly superior to those of the adjoining Province of Bengal. Bombay and Madras have substantially improved as compared with 1881 but it will be remembered that they had to bear the brunt of the 1876-78 famine which accounted for the very heavy mortality and the consequent low expectations of life of these two Provinces in 1881. The expectations of life at age 10 in these two Provinces in 1931 are smaller than in 1891, the decade 1881-1891 having been one of comparative prosperity for them. Bombay shows substantial improvement in 1931 as compared with 1901 and 1911. As regards the main cause of the low expectation of life shown by Bombay in 1901 it should be observed that this Province along with Central Provinces was affected by the 1899-1901 famine though Madras was unaffected by it. The expectation of life at age 10 for the province of Madras has been keeping more or less steady from 1911 onwards. Burma has always been noted for its lighter mortality as compared with other Indian Provinces in the past which reputation it yet maintains though the expectation of life of this Province does not indicate any decided tendency to increase but is keeping more or less steady. The first Life-Table with respect to the Central Provinces was constructed after the 1881 Census and the second one after the 1931 Census. The latter, however, includes the experience of the very large population contained in H. E. H. The Nizam's Dominions. It will be seen that the Central Provinces show substantial improvement in mortality in 1931 as compared with 1881. As has already been observed, a large portion of this improvement should naturally be traced to the improved machinery of Census-taking set up by the Hyderabad State at the 1931 Census. The Punjab group, comprising the British Provinces of the Punjab and the adjoining smaller Indian States together with Kashmir, the biggest in area of all the Indian States, shows in 1931 an improvement in mortality which is decidedly substantial. In 1911, however, this Province showed the heaviest mortality of all the Indian Provinces except perhaps the United Provinces. The improvement noticed in 1931 has been such as to bring the position practically back to the 1891 level when the experience of the Province as to mortality was the lightest of all the decennial investigations. It is highly probable that a part of the improvement has been due to combining the Punjab with Kashmir noted for its highly salubrious and temperate climate. It is, however, not possible to make any definite statement to this effect before proving by Actuarial analysis that the people in Kashmir are subject to lighter mortality than those in the Punjab as other factors may be at work, for instance, low economic status, neutralising the effect of the salubrious climate. Rajputana and Ajmere-Merwara as also Sind, Baluchistan and North-West Frontier Province are two Provincial groups with respect to which mortality Tables have been constructed for the first time at the 1931 Census. The former group has indicated the heaviest mortality for males of all Provincial groups dealt with. The United Provinces show some improvement in mortality in 1931 though it is not very substantial as indicated by the small increase averaging about a year as compared with 1891 in the expectation of life up to about age 40. The improvement in mortality for the male population of the whole of India in 1931 is indicated by the value of the expectation of life at age 10 which is very nearly one year in excess of the highest value of this function which was reached in 1891. Generally speaking, it can be said that the influence of the hygienic and economic factors that prevailed in the decennium 1921-1931 was such as to bring the condition of the Indian population as to its mortality experience nearly back to the 1891 position.

56. Amongst all the Provincial groups analysed, Burma shows the lightest mortality. As a matter of fact, it has been keeping up the first rank in this respect in all the three Censuses analysed with respect to this Province. Madras which used to keep always the second rank appears to have lost a little bit of ground, as the Punjab, judged by the value of the expectation of life at age 10, has superseded it in 1931. Whether the grouping of the British Province of Madras with the adjoining Indian States has proved a disadvantage to it and the grouping of the Punjab with Kashmir has proved an advantage to the Punjab group is a matter

which requires further detailed analysis. It is, however, somewhat significant that the two Provinces, Burma and Madras, which have been indicating substantially lighter mortality than that of the other Indian Provinces, have been the least inaccurate in returning ages. Bihar and Orissa for which a Life Table has been constructed for the first time in connection with the 1931 Census indicate mortality at all ages up to 50 substantially lighter than the adjoining Provincial group, Bengal and Assam, which exhibits the worst vitality of all the Provinces except perhaps Rajputana and Ajmere-Merwara group. The difference between the vitalities of these two Provincial groups is not, however, very substantial.

57. The comparative statements detailed above have been made with special reference to the expectations of life relating to male lives of the various Provincial groups and for All-India appearing in Table XXXI. The corresponding expectations of life relating to females are given in Table XXXII. Here again Burma females show the lightest mortality. As between Madras and the Punjab females, the former show lighter mortality at all young ages up to 30 and after this age the position is reversed. The heaviest mortality amongst females is shown by the Sind, Baluchistan and North-West Frontier Province group. This is very probably due to the strict ' purdah ' observed by the females in this group of which the population is predominantly Muhammadan. Vitality, only superior to that of the Provincial group just considered but inferior to the rest of India, is shown by Bengal and Assam, and Rajputana and Ajmere-Merwara groups. The former shows heavier mortality than the latter upto about age 40 after which the position is reversed. Taking female mortality as a whole it can be stated that the deterioration which set in from 1901 onwards has not yet taken a definite turn towards improvement. Whereas in the case of males the position in 1931 with respect to vitality was such as to bring it back very nearly up to the high level reached in 1891, the female vitality, however, does not indicate any recovery of the lost ground.

58. So far I have compared either the same Province at different Censuses or one Province with another at the same Census. It will, however, be interesting to compare Indian mortality with that of the other countries of the world. It has often been said that the Indian population exhibits the worst vitality of all the countries of the world which have analysed their mortality experience but, except perhaps for Tables comparing India with England, no statistics have been published so far to indicate the force of the statement that India exhibits the heaviest mortality of all civilised countries. Believing in the truism that figures speak more forcibly than words, I have taken advantage of the publication in Prof. Glover's admirable volume, "United States Life-Tables 1890—1910" of the mortality Tables relating to no less than thirteen representative countries of the world including India. These are exhibited in the six Tables from XXXIII to XXXVIII three of which relate to males and the other three to females. Prof. Glover has given in his volume extensive figures for all the functions of the mortality Tables and for each age to which none, interested in studying the comparative mortality of the countries of the world, can help referring. I have, however, chosen only three of these mortality functions and have also further condensed my Tables by giving values only at quinquennial ages. Tables XXXIII and XXXIV give for males and females respectively the number of persons that die in a year out of 1,000 observed at each quinquennial age. The very heavy rate of mortality experienced by the Indian population as compared with all the other twelve countries will be evident. It will also be observed that the ratio of the mortality in India to the mortality of the other countries is very large at the younger ages and at some age points the mortality in India is more than nearly seven times as heavy as that of countries which exhibit light mortality. As age advances there is a tendency for the ratio to diminish; yet the Indian mortality keeps substantially heavier than that of the other countries. Tables XXXV and XXXVI, showing for the two sexes how rapidly the numbers surviving to each quinquennial age out of 100,000 children born diminish, might be considered as affording a better basis for comparative study by some people. It will be seen that, in India, before age 5 is reached nearly 45,000 young lives out of 100,000 children born are lost, whereas even the country that exhibits the lowest survivorship amongst the other twelve brought into the comparison shows a wastage of only about 27,000 and Norway noted for its very light mortality loses only something less than 12,000 in the first 5 ages. Survivors to age 10 are only about half the number of children born in India and the very large number surviving

to this age in other countries will be evident from a study of the Tables. The two Tables afford a ready means of making such comparisons at all quinquennial ages and the appallingly heavy toll claimed by death in India will be evident even from a cursory scrutiny of them. Tables XXXVII and XXXVIII give the values of the expectations of life for all the countries and the small values, as compared with other countries, of this function relating to India as a sure indication of the very heavy mortality experienced by it will be evident.

59. In bringing this Report to a close, I have to draw the special attention of the authorities in charge of the registration of the vital occurrences in India to the extreme desirability, nay necessity, of focussing particular attention on a limited area in each Province with the view to obtain complete statistics of births and deaths in the locality, the latter either according to individual ages or quinquennial age periods grouped in the same manner as recommended by me for the 1941 Census enumeration. As many as six Actuarial analyses undertaken in connection with Indian Censuses have been performed by methods more or less in the nature of makeshifts and it will be extremely desirable to make the seventh and subsequent ones, at least, follow the normal and, therefore, comparatively more easy method of mortality Table construction. I know it will be practically impossible to expect the records of vital statistics with respect to the entire area in each Province in India to come up to the requisite degree of accuracy within a decade. That is why I am recommending a representative small area in each Province being subject to special scrutiny so that it may provide, by the time of the next Census, dependable records of vital occurrences. The relatively great accuracy of the records of vital statistics in the Presidency of Madras have been commented upon earlier in this Report. If this accuracy is maintained and further improved upon, we shall have by 1941 sufficient material on hand with respect to one very large Province supplying a long felt want.

60. Just when this Report is nearing completion, practically at the very moment I am writing these lines, I have received from the Census Commissioner a Table showing the deaths in the Presidency of Madras that occurred during the ten calendar years, 1921 to 1930, both inclusive. It will, therefore, not be possible for me to make any investigations making use of the statistics of deaths, in such time as to enable the results to be incorporated in this Report. This will, however, be done in a Paper I propose to submit to the Institute of Actuaries, London. The infantile deaths, *i.e.*, deaths below age one, are divided in this Table into four useful categories as follows: "under one week", "over one week (and under one month)", "over one month but not exceeding six months" and "over six months but not exceeding twelve months". With respect to higher ages, however, up to age 20, one finds the orthodox quinquennial groupings '1—4', '5—9', '10—14' and '15—19'. From age 20 onwards the groupings are decennial with one large group at the end of 60 and over. The groups could preferably be modified to be in conformity with those to be adopted in collecting population statistics at the 1941 Census. It will be essential, if the Life Tables to be constructed after the 1941 Census are to include the Indian States in the same way as the Life Tables constructed now do, that the Indian States should also make efforts to supply reliable statistics of vital occurrences in the inter-censal period between now and the date of the next Census. If this is not done and if reliable records of births and deaths are only available for British Provinces there will be no other alternative but to revert to the old method of constructing Life Tables only with reference to the British Provinces in India.

61. The situation takes a different aspect altogether when we come to consider the ages of infancy and childhood. Here without exaggeration we are simply groping in the dark and it has only been repeated too often by my predecessors and myself that the Proclaimed Clans experience of nearly half a century ago is entirely useless as giving any basis to deduce mortality rates at the very young ages applicable to the present generation of children. If the recommendations made in the previous paragraph are given effect to from now there would be sufficient statistics on hand by about the next Census date which would provide reliable basis to the investigating Actuary to deduce mortality rates not only at the ages of infancy and childhood but also at the older ages. If, however, it is found not possible just yet to give immediate effect to them in their entirety, steps should be taken to maintain accurate records of births and deaths up to

age 15 at least in representative small areas in each Province. This will provide the Actuary at the next Census with sufficient material to deduce reliable rate of mortality at the very young ages. Recommendations to this effect were made by Sir George Hardy after the 1901 Census, repeated by Mr. Ackland after 1911 Census and emphasised by Mr. Meikle after the 1921 Census, but, one has to state with regret, to no purpose. Mr. Ackland said in this connection "The record and investigation of these statistics (Proclaimed Clans statistics) apparently ceased in 1904 and, as explained earlier in the present Report and in Mr. Hardy's 1901 Report, the data furnished between 1891 and 1904 were so limited as to age as to be practically useless for the purposes desired. It is clear that results based on statistics referring to the period 1876-1890, could not properly be employed in any future investigation of Census Returns; and it is therefore most desirable, and indeed essential, if complete Life-Tables are to be deduced in future, that some effort should be made to secure trustworthy data as to the births in the several Provinces, and the deaths at the ages of infancy and childhood". Ackland's words expressed in the above terms twenty years ago, will hold even more emphatically by the time the next Census falls to be taken. It is, therefore, earnestly hoped that the Government of each Province will take the necessary steps to give effect to the recommendations in this respect at least.

Acknowledgments.

62. It is now my pleasant duty to acknowledge help from various persons which I received not only in the preparation of this Report but also in making the very elaborate calculations which the construction of the twenty-two Life Tables had involved, of which only those that have had any experience in conducting statistical investigations in all their various details would have an adequate idea. I had naturally to be in constant correspondence with Dr. Hutton, the Census Commissioner for India, and his replies to my various enquiries were prompt, full and marked by an extreme measure of courtesy which is gratefully acknowledged. I found his intimate knowledge of the conditions obtaining in the different parts of India and of Indian sociology of particular help in forming my Provincial groups. I have to express my indebtedness to my friend and colleague in the Oriental Life Office, Mr. Douglas Forrest, F.F.A., who read the Report in manuscript and gave suggestions of a useful character. As regards the help I received to complete the laborious work in connection with the preparation of the Life Tables I have been particularly fortunate, for, what I received was not help of a purely clerical nature, but help from young men aspiring for Actuarial honours and therefore imbued with the desire to learn the work. It was a pleasure to see these young men from day to day ever ready to take up with a cheerful countenance the large quantity of laborious work they were called upon to do. To one and all of them I express my gratitude and do hope that the training they received will stand them in good stead, when in the fullness of time some of them at least may be called upon to undertake investigations of a similar nature. My sincere thanks are also due to Mr. Minocher J. S. Khras, F.S.S., a friend and colleague of mine whose very long association with the Royal Statistical Society extending over a period of more than a quarter of a century was particularly helpful in placing at my disposal the vast store of Statistical knowledge carefully preserved in the pages of the Journals of that body to which and to the pages of the Journals of the Institute of Actuaries—that storehouse of knowledge on Actuarial matters—I had constantly to refer to derive inspiration when the work was in progress.

L. S. VAIDYANATHAN,

M.A., F.I.A.

ORIENTAL BUILDINGS,

Bombay, 29th March 1933.

TABLE XXIX.

Comparative Rates of Mortality ($100q_x$) at quinquennial ages, as deduced from the results of the 1881, 1891, 1901, 1911, 1921 and 1931 Censuses respectively in the several Provinces specified and over the combined area, with corresponding values for England.

MALE LIVES.

Age.	Bengal.							Bihar and Orissa.	Bombay.							Burma.				Central Provinces and Hyderabad.		Madras.					
	1881.	1891.	1901.	1911.	1921. Hindus	1921. Mahomedans.	1931.	1931.	1881.	1891.	1901.	1911.	1921. Hindus.	1921. Mahomedans.	1931.	1901.	1911.	1921.	1931.	1881.	1931.	1881.	1891.	1901.	1911.	1921.	1931.
0	28·27	28·82	29·89	29·86	..	..	24·96	23·75	28·44	26·35	29·79	29·69	..	..	23·85	23·83	22·34	..	22·30	28·44	24·90	28·75	26·35	26·81	27·39	..	23·55
5	2·29	2·86	3·03	2·97	2·00	2·65	2·22	1·51	2·43	2·58	2·81	2·60	2·95	2·53	1·78	1·93	1·74	1·99	1·59	2·43	1·53	2·71	2·58	2·34	2·55	2·43	1·64
10	1·04	1·22	1·49	1·42	·90	1·17	1·04	·45	1·13	1·10	1·26	1·03	1·28	·95	·60	·83	·75	·89	·54	1·13	·56	1·25	1·10	1·03	1·14	1·22	·66
15	1·51	1·22	1·47	1·51	1·04	1·48	1·11	·74	1·62	1·04	1·15	·95	1·30	·91	·92	·91	·77	·90	·87	1·62	·92	1·73	1·04	1·01	1·08	1·17	·91
20	1·76	1·56	1·75	1·82	1·40	1·69	1·38	1·11	1·93	1·18	1·30	1·53	1·43	·96	1·27	1·20	1·15	·95	1·14	1·95	1·30	2·06	1·18	1·21	1·15	1·23	1·18
25	1·86	1·92	2·07	2·06	1·81	1·97	1·81	1·36	2·13	1·38	1·55	2·12	1·81	1·32	1·56	1·47	1·55	1·08	1·30	2·15	1·56	2·22	1·38	1·41	1·31	1·39	1·37
30	1·99	2·32	2·42	2·34	2·36	2·38	2·41	1·66	2·35	1·64	1·90	2·63	2·29	1·95	1·88	1·73	1·82	1·35	1·52	2·39	1·85	2·37	1·61	1·66	1·64	1·72	1·73
35	2·17	2·72	2·77	2·74	3·04	2·93	3·02	2·15	2·60	1·98	2·40	3·09	2·84	2·61	2·27	1·96	1·91	1·77	2·02	2·69	2·31	2·55	1·90	2·06	2·12	2·19	2·28
40	2·46	3·16	3·12	3·24	3·80	3·57	3·65	2·81	2·88	2·44	3·05	3·56	3·50	3·32	2·76	2·19	2·04	2·29	2·49	3·03	2·89	2·79	2·24	2·66	2·71	2·79	2·81
45	2·89	3·68	3·48	3·77	4·48	4·15	4·25	3·52	3·29	3·05	3·85	4·06	4·20	4·00	3·31	2·43	2·32	2·76	2·78	3·47	3·35	3·11	2·64	3·40	3·19	3·33	3·33
50	3·47	4·30	3·97	4·38	5·19	4·78	4·81	4·32	3·97	3·85	4·80	4·67	5·03	4·82	4·04	2·73	2·73	3·29	3·12	4·13	3·73	3·61	3·13	4·20	3·72	3·97	3·90
55	4·38	5·06	4·74	5·14	5·86	5·40	5·43	5·30	5·07	4·90	5·90	5·44	5·95	5·66	5·03	3·18	3·25	3·87	3·68	5·27	4·12	4·46	3·83	5·01	4·33	4·66	4·50
60	5·88	6·21	5·97	6·30	6·58	6·11	6·17	6·60	6·71	6·30	7·26	6·46	7·11	6·73	6·32	3·98	4·51	4·59	4·62	6·99	4·73	5·84	4·93	5·93	5·06	5·49	5·43
65	8·25	7·92	8·08	8·31	7·52	7·10	7·35	8·51	9·35	8·26	9·29	7·89	8·68	8·24	8·17	5·38	6·57	5·69	6·36	9·73	6·34	8·01	6·59	7·44	6·10	6·67	6·87
70	11·96	10·48	11·52	11·80	..	..	9·42	11·32	13·42	11·11	12·52	10·01	..	..	11·00	7·75	9·36	..	9·09	13·96	10·11	11·44	9·06	10·16	7·78	..	9·37
75	17·53	14·30	17·01	17·86	..	..	14·07	15·04	19·56	15·21	17·74	13·46	..	..	15·71	11·76	13·56	..	14·07	20·32	16·92	16·79	12·78	14·66	10·70	..	13·96
80	25·32	19·99	25·27	28·32	..	..	23·43	22·56	28·33	21·35	25·73	19·74	..	..	23·58	18·00	19·74	..	21·74	29·42	23·85	24·91	18·32	21·40	16·38	..	21·88
85	36·65	28·49	36·59	44·82	..	..	38·43	35·63	41·54	30·50	37·50	31·16	..	..	37·62	27·18	28·58	..	31·90	44·90	39·91	35·48	26·62	31·07	27·22	..	35·53
90	60·00	41·20	51·22	65·73	..	..	58·57	54·38	100·00	43·89	54·00	48·72	..	..	62·13	39·71	40·49	..	44·64	100·00	56·09	60·00	38·99	44·40	45·74	..	55·48

TABLE XXIX—(*contd.*)

Comparative Rates of Mortality ($100q_x$) at quinquennial ages, as deduced from the results of the 1881, 1891, 1901, 1911, 1921 and 1931 Censuses respectively, in the several Provinces specified and over the combined area, with corresponding values for England.

MALE LIVES.

Age.	Punjab.						Rajputana and Ajmer-Merwara.	Sind & N. W. F. Provinces.	United Provinces.							All India.						England.	
	1881.	1891.	1901.	1911.	1921.	1931.	1931.	1931.	1881.	1891.	1901.	1911.	1921. Hindus.	1921. Mahomedans.	1931.	1881.	1891.	1901.	1911.	1921.	1931.	1911.	1921.
0	28·27	26·35	29·79	29·79	..	23·98	27·39	26·01	28·44	26·35	26·81	29·79	..	..	27·86	28·41	27·26	28·54	29·00	..	24·87	12·04	9·00
5	2·29	2·58	2·81	2·81	2·50	2·07	2·47	1·89	2·43	2·58	2·33	2·81	2·64	2·18	2·37	2·41	2·68	2·67	2·75	2·52	1·93	·49	·42
10	1·04	1·10	1·26	1·22	1·36	·77	1·30	·90	1·14	1·10	1·03	1·26	1·27	1·06	1·05	1·11	1·14	1·24	1·25	1·22	·79	·19	·18
15	1·41	1·02	1·24	1·77	1·38	·91	1·22	1·09	1·56	1·15	·95	1·27	1·36	1·32	1·11	1·56	1·13	1·17	1·32	1·26	·98	·23	·22
20	1·65	1·12	1·52	2·04	1·48	1·25	1·29	1·35	1·87	1·49	1·13	1·93	1·68	1·63	1·34	1·85	1·39	1·43	1·69	1·42	1·27	·35	·35
25	1·85	1·36	1·86	2·30	1·67	1·53	1·67	1·61	2·11	1·88	1·46	2·52	2·03	1·91	1·56	2·00	1·69	1·69	2·03	1·68	1·53	·40	·40
30	2·05	1·67	2·16	2·62	2·01	1·78	2·33	2·11	2·33	2·28	1·91	2·94	2·37	2·29	1·91	2·18	2·04	2·02	2·37	2·10	1·93	·48	·43
35	2·26	2·04	2·46	3·04	2·49	2·07	2·92	2·82	2·56	2·72	2·50	3·30	2·87	2·72	2·40	2·38	2·43	2·49	2·77	2·67	2·41	·62	·55
40	2·51	2·49	2·76	3·61	3·07	2·42	3·51	3·52	2·85	3·19	3·23	3·65	3·60	3·24	2·99	2·66	2·85	3·01	3·24	3·33	2·94	·81	·69
45	2·85	3·02	3·06	4·18	3·58	2·82	4·10	4·17	3·31	3·72	4·06	4·06	4·27	3·78	3·61	3·05	3·37	3·64	3·72	4·00	3·49	1·09	·88
50	3·34	3·62	3·43	4·62	4·07	3·32	4·71	4·76	4·04	4·36	4·90	4·62	5·08	4·41	4·30	3·66	3·98	4·30	4·28	4·72	4·10	1·48	1·18
55	4·10	4·36	3·99	5·14	4·61	4·06	5·51	5·36	5·22	5·21	5·77	5·41	6·00	5·12	5·16	4·61	4·78	5·09	4·98	5·46	4·81	2·11	1·76
60	5·35	5·22	4·99	5·80	5·28	5·24	6·65	6·06	7·01	6·41	6·98	6·52	7·20	6·12	6·34	6·12	5·93	6·25	6·00	6·31	5·79	3·04	2·56
65	7·30	6·47	6·70	6·68	6·30	7·17	8·43	7·37	9·86	8·21	9·05	8·05	8·83	7·68	8·05	8·50	7·64	8·14	7·57	7·43	7·27	4·38	3·98
70	10·32	8·42	9·62	8·76	..	10·34	11·22	11·05	14·22	10·89	12·28	10·27	..	..	10·77	12·18	10·16	11·36	10·17	..	9·76	6·47	6·00
75	14·95	11·30	14·35	14·15	..	15·63	16·05	17·62	20·71	14·92	17·26	13·52	..	..	15·37	17·68	13·93	16·12	14·71	..	14·27	9·75	9·38
80	21·47	15·62	21·59	22·04	..	24·30	24·15	26·50	30·05	20·96	24·69	19·54	..	..	23·18	25·28	19·58	23·55	22·55	..	21·80	14·30	14·00
85	31·47	22·07	32·12	36·23	..	37·10	37·37	38·24	42·00	30·01	35·14	33·04	..	..	37·30	36·17	28·03	33·88	36·35	..	36·08	19·91	19·97
90	9000·00	31·77	46·72	58·39	..	54·05	57·58	52·70	100·00	43·50	50·90	58·64	..	..	60·10	62·50	40·62	47·86	57·20	..	57·70	27·40	26·75

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TABLE XXX.

Comparative Rates of Mortality ($100q_x$) at quinquennial ages, as deduced from the results of the 1881, 1891, 1901, 1911, 1921 and 1931 Censuses respectively, in the several Provinces specified and over the combined area, with corresponding values for England.

FEMALE LIVES.

Age.	Bengal							Bihar and Orissa.	Bombay.							Burma				C. P. and Hyderabad.		Madras.					
	1881.	1891.	1901.	1911.	1921. Hindus.	1921. Mahomedans.	1931.	1931.	1881.	1891.	1901.	1911.	1921. Hindus.	1921. Mahomedans.	1931.	1901.	1911.	1921.	1931.	1881.	1931.	1881.	1891.	1901.	1911.	1921.	1931.
0	24·12	25·36	26·05	29·76	..	..	23·36	23·23	20·29	23·19	25·85	29·58	..	..	23·45	19·06	22·07	..	20·30	24·29	22·76	24·60	23·19	23·60	25·70	..	21·46
5	2·08	2·80	3·15	2·90	2·81	3·43	1·93	1·42	2·22	2·53	2·85	2·48	3·38	3·35	2·06	1·89	1·42	2·00	1·23	2·22	1·24	2·50	2·53	2·45	2·34	2·04	1·12
10	1·06	1·39	1·71	1·44	1·55	1·93	1·07	·60	1·16	1·25	1·39	·96	1·88	1·84	1·08	·85	·53	1·08	·52	1·16	·63	1·27	1·25	1·21	1·34	1·25	·50
15	1·70	1·67	1·84	1·59	1·61	2·09	1·42	1·15	1·81	1·45	1·61	·94	1·45	1·30	1·30	1·17	·66	1·09	·99	1·81	1·20	1·92	1·44	1·32	1·24	1·27	·94
20	2·05	2·01	2·11	1·92	1·78	2·31	2·01	1·84	2·22	1·59	1·62	1·56	1·69	1·60	1·71	1·66	1·12	1·16	1·59	2·24	1·83	2·35	1·59	1·44	1·25	1·40	1·49
25	2·13	2·25	2·50	2·11	1·94	2·49	2·52	2·26	2·40	1·68	1·72	2·18	2·04	2·00	2·02	1·97	1·58	1·57	1·96	2·42	2·24	2·47	1·68	1·58	1·37	1·59	1·85
30	2·19	2·50	2·74	2·36	2·29	2·83	3·00	2·51	2·55	1·80	1·93	2·68	2·45	2·42	2·28	2·11	1·93	1·82	2·18	2·59	2·53	2·57	1·77	1·73	1·64	1·92	2·17
35	2·26	2·75	2·75	2·70	2·74	3·26	3·45	2·72	2·69	2·00	2·39	3·09	3·00	2·99	2·56	2·10	2·02	1·94	2·35	2·78	2·77	2·65	1·93	2·05	2·05	2·32	2·51
40	2·40	3·01	2·72	3·16	3·31	3·79	3·88	3·02	2·82	2·31	2·99	3·48	3·60	3·59	2·92	1·96	2·09	2·06	2·56	2·97	3·02	2·75	2·11	2·57	2·60	2·85	2·94
45	2·61	3·28	2·89	3·65	3·85	4·30	4·25	3·53	3·04	2·69	3·63	3·93	4·17	4·11	3·31	1·94	2·31	2·44	2·78	3·21	3·23	2·85	2·29	3·23	3·01	3·25	3·38
50	2·96	3·65	3·28	4·20	4·42	4·81	4·60	4·23	3·46	3·27	4·29	4·50	4·77	4·73	3·82	2·20	2·66	2·95	3·07	3·62	3·47	3·10	2·55	3·88	3·48	3·71	3·88
55	3·65	4·18	3·98	4·92	5·02	5·32	4·94	5·14	4·35	4·11	5·24	5·23	5·33	4·97	4·48	2·59	3·12	3·51	3·50	4·55	3·84	3·74	3·04	4·48	4·03	4·25	4·47
60	5·11	5·27	5·12	6·09	5·76	5·97	5·46	6·32	5·95	5·45	6·40	6·21	6·33	5·78	5·47	3·25	4·36	4·28	4·27	6·21	4·45	5·07	4·08	5·16	4·75	4·97	5·30
65	7·48	7·00	7·18	8·11	6·87	6·98	6·49	8·03	8·56	7·42	8·36	7·66	6·83	6·56	7·02	4·44	6·41	5·45	5·72	8·96	5·70	7·24	5·75	6·52	5·81	6·12	6·68
70	11·21	9·58	10·66	11·63	..	..	8·57	10·58	12·65	10·29	11·79	9·80	..	..	9·54	6·87	9·20	..	8·40	13·19	8·05	10·66	8·24	9·26	7·53	..	8·99
75	16·84	13·44	16·13	17·71	..	..	12·65	14·77	18·76	14·41	17·07	13·29	..	..	13·88	10·89	13·41	..	12·98	19·54	12·43	16·11	11·96	13·78	10·47	..	13·24
80	24·74	19·19	24·29	28·21	..	..	20·93	20·98	27·54	20·60	24·88	19·60	..	..	21·54	17·18	19·62	..	20·22	28·79	22·59	24·33	17·57	20·47	16·19	..	21·02
85	36·00	27·78	35·71	44·74	..	..	34·95	30·65	43·85	29·80	35·80	31·08	..	..	35·02	26·45	28·49	..	30·05	43·66	38·80	35·02	25·92	29·39	27·08	..	32·84
90	57·14	40·60	50·34	65·69	..	..	57·14	47·03	100·00	43·28	49·90	48·67	..	..	58·14	39·11	40·43	..	42·49	100·00	55·01	60·00	38·38	40·29	45·64	..	48·78

TABLE XXX—(*contd.*)

Comparative Rates of Mortality ($100q_x$) at quinquennial ages, as deduced from the results of the 1881, 1891, 1901, 1911, 1921 and 1931 Censuses respectively, in the several Provinces specified and over the combined area, with corresponding values for England.

FEMALE LIVES.

Age.	Punjab.				Rajputana and Ajmer Merwara.	Sind & N.-W. F. Provinces.	United Provinces.							All India.						England.	
	1881.	1891.	1921.	1931.	1931.	1931.	1881.	1891.	1901.	1911.	1921. Hindus.	1921. Mahomedans.	1931.	1881.	1891.	1901.	1911.	1921.	1931.	1911.	1921.
0	24·12	23·19	..	23·65	24·26	25·66	24·29	23·19	27·28	29·75	..	..	25·38	24·26	23·99	25·88	28·46	..	23·23	9·77	6·94
5	2·08	2·53	3·17	2·02	1·81	1·65	2·22	2·53	2·92	2·79	2·49	2·57	2·14	2·20	2·63	2·91	2·62	2·78	1·65	·48	·42
10	1·06	1·25	1·80	1·04	·82	1·24	1·16	1·27	1·35	1·28	1·25	1·40	·98	1·14	1·31	1·49	1·29	1·55	·81	·20	·18
15	1·60	1·43	1·90	1·29	1·13	1·50	1·75	1·60	1·18	1·29	1·55	1·56	1·23	1·75	1·56	1·48	1·34	1·57	1·15	·24	·23
20	1·94	1·53	2·05	1·75	1·66	1·88	2·16	1·94	1·37	1·89	1·81	1·81	1·76	2·14	1·81	1·72	1·70	1·73	1·76	·29	·31
25	2·12	1·67	2·19	2·13	2·09	2·30	2·38	2·21	1·76	2·41	2·03	2·02	2·20	2·27	2·01	2·00	2·00	1·92	2·16	·34	·35
30	2·25	1·83	2·53	2·44	2·51	3·00	2·53	2·46	2·07	2·80	2·38	2·36	2·56	2·37	2·21	2·24	2·31	2·24	2·51	·41	·39
35	2·35	2·07	2·89	2·70	2·94	3·88	2·65	2·75	2·44	3·11	2·84	2·76	2·86	2·47	2·46	2·46	2·66	2·72	2·93	·52	·45
40	2·45	2·36	3·40	2·91	3·43	4·59	2·79	3·04	2·87	3·49	3·38	3·27	3·17	2·59	2·71	2·77	3·08	3·26	3·45	·66	·53
45	2·59	2·66	3·88	3·01	3·95	5·22	3·05	3·32	3·39	3·94	3·91	3·82	3·45	2·79	2·99	3·21	3·53	3·81	3·90	·85	·67
50	2·83	3·04	4·36	3·32	4·53	5·74	3·53	3·71	4·05	4·50	4·68	4·44	3·78	3·15	3·37	3·76	4·06	4·40	4·31	1·14	·92
55	3·37	3·57	4·88	3·84	5·27	6·19	4·51	4·33	4·87	5·27	5·51	5·17	4·21	3·89	3·97	4·49	4·74	5·01	4·75	1·61	1·32
60	4·58	4·35	5·53	4·67	6·26	6·95	6·23	5·47	6·12	6·34	6·56	6·14	4·96	5·35	5·05	5·59	5·78	5·77	5·43	2·31	1·90
65	6·53	5·61	6·58	6·00	7·75	8·38	9·08	7·29	8·15	7·86	8·12	7·70	6·31	7·73	6·77	7·50	7·44	6·99	6·66	3·34	2·99
70	9·56	7·57	..	82·47	10·33	11·67	13·47	10·00	11·40	10·02	..	..	8·75	11·42	9·32	10·67	10·12	..	8·88	5·26	4·65
75	14·30	10·50	..	12·38	14·63	18·85	19·98	14·07	16·44	13·36	..	..	13·90	17·02	13·13	15·79	14·60	..	13·01	8·08	7·59
80	21·00	14·87	..	19·48	22·35	32·03	29·43	20·16	23·94	19·41	..	..	22·24	24·93	18·83	23·24	22·49	..	20·66	12·42	11·77
85	31·13	21·37	..	32·75	35·85	53·13	41·67	29·30	34·49	32·95	..	..	33·77	36·84	27·36	33·26	36·28	..	34·76	17·34	17·47
90	48·84	31·16	..	51·82	56·14	..	100·00	42·93	48·22	58·60	..	..	48·50	63·63	40·06	45·23	59·07	..	56·67	23·83	23·85

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TABLE XXXI.

Comparative Expectations of Life at decennial ages, as deduced from the results of the 1881, 1891, 1901, 1911 and 1931 Censuses respectively, in the several Provinces specified and over the combined area, with corresponding values for England.

MALE LIVES.

Age.	Bengal.					Bihar and Orissa.	Bombay.					Burma.			C. P. and Hyderabad.	
	1881	1891.	1901.	1911.	1931.	1931.	1881.	1891.	1901.	1911.	1931.	1901.	1911.	1931.	1881.	1931.
0	24·50	22·78	21·57	21·47	24·91	28·88	23·04	26·12	22·77	22·52	27·84	30·29	31·48	30·61	22·83	28·10
10	35·04	33·85	32·95	32·54	33·68	37·59	32·87	37·20	34·62	33·33	36·72	39·39	39·88	39·55	32·46	37·29
20	29·56	27·77	27·50	27·10	27·08	29·97	27·38	30·87	28·39	26·43	29·61	33·28	32·82	32·49	26·92	30·22
30	24·62	22·51	22·64	22·15	21·39	23·55	22·71	24·67	22·27	21·32	23·70	27·68	27·30	26·28	22·20	24·42
40	19·43	17·98	18·28	17·56	17·11	17·93	18·01	18·94	16·90	17·23	18·43	22·58	22·04	20·90	17·55	19·42
50	14·25	13·83	13·93	13·39	13·62	13·36	13·17	13·88	12·48	13·51	13·73	17·45	16·51	16·04	12·85	15·18
60	9·42	9·89	9·52	9·27	10·16	9·39	8·66	9·55	8·73	9·94	9·55	12·18	11·00	11·04	8·43	10·57
70	5·49	6·35	5·61	5·40	6·38	5·96	5·01	6·05	5·38	6·55	5·89	7·37	6·66	6·52	4·85	5·77
80	2·86	3·59	2·86	2·49	2·92	3·08	2·51	3·39	2·81	3·48	2·95	3·84	3·61	3·28	2·42	2·67
90	1·00	1·69	1·07	·95	1·00	1·20	·50	1·65	1·07	1·41	1·00	1·75	1·77	1·62	·50	1·22

Age.	Madras.					Punjab.					Rajputana & Ajmer-Merwara.	Sind & North-West Frontier Provinces.	United Provinces.				
	1881.	1891.	1901.	1911.	1931.	1881.	1891.	1901.	1911.	1931	1931.	1931.	1881.	1891.	1901.	1911.	1931.
0	22·35	26·92	26·21	25·92	28·71	24·80	26·58	23·18	21·23	28·05	23·60	25·43	23·10	24·45	25·30	21·21	24·56
10	32·92	38·70	36·93	37·78	37·61	35·57	38·07	35·45	31·38	38·07	33·60	34·47	32·97	34·10	35·26	31·44	35·45
20	27·86	32·55	30·43	31·60	30·60	29·92	31·76	29·59	26·12	31·22	27·41	27·79	27·38	27·75	28·43	25·27	29·06
30	23·59	26·57	24·24	25·35	24·36	24·96	25·60	24·54	21·60	25·45	21·45	21·77	22·63	22·35	22·01	20·89	23·11
40	19·06	21·06	18·60	20·06	19·17	20·05	20·22	19·99	17·55	20·13	16·95	17·10	17·46	17·74	16·76	17·18	17·96
50	14·28	15·91	14·05	15·74	14·79	15·07	15·56	15·43	14·15	15·09	13·10	13·43	12·91	13·56	12·64	13·47	13·61
60	9·60	11·06	10·10	11·70	10·56	10·25	11·41	10·70	10·63	10·22	9·35	9·74	8·36	9·63	8·92	9·84	9·64
70	5·66	6·94	6·27	7·68	6·45	6·19	7·60	6·39	6·53	5·98	5·80	5·57	4·78	6·15	5·50	6·50	5·98
80	2·92	3·85	3·35	3·98	3·13	3·32	4·48	3·28	3·11	2·91	2·92	2·73	2·41	3·43	2·96	3·42	2·98
90	1·00	1·82	1·56	1·50	1·13	1·20	2·26	1·38	1·13	1·19	1·00	1·07	·50	1·60	1·23	1·11	·71

Age.	All India.					England.		
	1881.	1891.	1901.	1911.	1931.	1901.	1911.	1921.
0 ..	23·67	24·59	23·63	22·59	26·91	44·07	46·04	55·62
10 ..	34·00	35·46	34·73	33·36	36·38	49·65	52·35	44·64
20 ..	28·55	29·24	28·59	27·46	29·57	41·04	43·67	45·78
30 ..	23·80	23·66	22·90	22·45	23·60	33·06	35·29	37·40
40 ..	18·90	18·75	17·91	18·01	18·60	25·65	27·27	29·19
50 ..	13·93	14·28	13·59	13·97	14·31	18·89	19·85	21·36
60 ..	9·25	10·12	9·53	10·00	10·25	12·90	13·83	14·36
70 ..	5·44	6·48	5.80	6·19	6·35	8·02	8·25	8·75
80 ..	2·87	3·65	3·07	3·06	3·13	4·40	4·64	4·93
90 ..	1·00	1·69	1·23	1·15	1·12	2·32	2·37	2·82

TABLE XXXII.

Comparative Expectations of Life at decennial ages, as deduced from the results of the 1881, 1891, 1901, 1911 and 1931 Censuses respectively, in the several Provinces specified and over the combined area, with corresponding values for England.

FEMALE LIVES.

Age.	Bengal.					Bihar & Orissa.	Bombay.					Burma.			Central Provinces and Hyderabad.	
	1881.	1891.	1901.	1911.	1931.	1931.	1881.	1891.	1901.	1911.	1931.	1901.	1911.	1931.	1881.	1931.
0	26·51	23·73	22·51	21·58	24·80	26·90	24·89	27·07	24·05	22·86	26·37	32·21	32·61	31·00	24·65	28·21
10	34·48	32·76	32·03	32·44	31·31	33·78	32·26	36·15	33·69	33·50	34·41	38·92	40·22	37·23	31·84	34·79
20	29·47	27·76	27·55	27·20	25·27	27·07	27·20	30·92	28·52	26·54	28·48	32·98	32·67	30·40	26·72	28·33
30	25·34	23·52	23·86	22·45	20·98	22·54	23·27	25·69	22·98	21·57	23·66	28·96	27·21	25·76	22·69	24·08
40	20·60	19·43	19·99	17·91	17·61	18·11	19·00	20·31	17·78	17·60	19·15	24·62	22·24	21·33	18·50	20·24
50	15·33	15·16	15·14	13·67	14·51	13·72	14·10	15·07	13·37	13·81	14·79	19·00	16·75	16·64	13·75	16·19
60	9·97	10·65	10·18	9·40	10·95	9·75	9·15	10·24	9·30	10·13	10·48	13·16	11·15	11·63	8·90	11·60
70	5·69	6·68	5·87	5·43	6·85	6·21	5·19	6·33	5·58	6·62	6·46	7·77	6·72	6·89	5·03	6·88
80	2·90	3·70	2·95	2·48	3·22	3·40	2·55	3·47	2·92	3·49	3·17	3·96	3·63	3·49	2·46	2·95
90	1·07	1·59	1·31	·95	1·10	1·53	·50	1·59	1·20	1·42	1·11	1·83	1·77	1·68	·50	1·25

Age.	Madras.					Punjab.			Rajputana and Ajmer-Merwara.	Sind and North-West Frontier Provinces.	United Provinces.				
	1881.	1891.	1901.	1911.	1931.	1881.	1891.	1931.	1931.	1931.	1881.	1891.	1901.	1911.	1931.
0	24·18	27·99	27·13	27·65	30·04	26·85	27·62	26·57	25·96	23·28	24·94	25·25	23·93	21·50	25·09
10	32·39	37·78	36·27	37·62	36·17	35·05	37·13	34·80	33·45	29·87	32·35	32·97	34·90	31·94	33·97
20	27·77	32·78	30·65	32·02	29·05	29·88	31·97	28·88	26·78	23·81	27·18	27·71	28·89	25·88	27·75
30	24·24	27·90	25·06	26·01	23·83	25·77	26·87	24·44	21·74	18·65	23·13	23·31	23·33	21·42	23·24
40	20·20	22·78	19·56	20·73	19·22	21·35	21·89	20·49	17·47	15·07	18·73	19·15	18·38	17·51	19·32
50	15·37	17·41	15·03	16·28	14·99	16·28	17·08	16·14	13·62	12·25	13·75	14·85	13·82	13·69	15·37
60	10·17	11·89	10·86	12·00	10·81	10·90	12·33	11·48	9·87	9·05	8·81	10·36	9·52	9·99	11·00
70	5·88	7·28	6·60	7·79	6·69	6·43	8·01	7·03	6·19	5·24	4·94	6·45	5·74	6·56	6·5
80	2·96	3·97	3·51	4·00	3·29	3·37	4·63	3·43	3·09	2·16	2·38	3·54	3·02	3·43	3·1
90	·93	1·85	1·77	1·50	1·34	1·30	2·30	1·31	1·15	..	·50	1·65	1·50	1·06	1·41

Age.	All India.					England.		
	1881.	1891.	1901.	1911.	1931.	1901.	1911.	1921.
0	25·58	25·54	23·96	23·31	26·56	47·70	50·02	59·58
10	33·42	34·40	33·86	33·74	33·61	51·98	55·02	57·53
20	28·44	29·28	28·64	27·96	27·08	43·45	46·36	48·73
30	24·48	24·69	23·82	22·99	22·30	35·43	37·84	40·26
40	20·03	20·20	19·12	18·49	18·23	27·81	29·65	31·86
50	14·96	15·59	14·50	14·28	14·65	20·63	21·87	23·69
60	9·79	10·87	10·02	10·11	10·81	14·08	14·81	16·22
70	5·63	6·80	5·98	6·22	6·74	8·74	9·13	9·95
80	2·88	3·76	3·12	3·06	3·25	4·84	5·10	5·56
90	·91	1·75	1·64	1·10	1·18	2·68	2·55	3·13

TABLE XXXIII.

Foreign Countries—Males—Annual rate of Mortality per thousand.

Taken from the published Life Tables of various countries, based on their official population and Death Statistics and exhibited here in tabular form so that a comparison may be made at each age.

Age.	Australia. 1901–1910.	Denmark. 1906–1910.	England. 1901–1910.	France. 1898–1903.	Germany. 1901–1910.	Holland. 1900–1909.	India. 1901–1910.	Italy. 1901–1910.	Japan. 1898–1903.	Norway. 1901–1910.	Sweden. 1901–1910.	Switzerland. 1901–1910.	United States. 1901–1910.
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
Males.													
0	95·10	120·67	144·34	163·26	202·34	140·46	289·98	167·71	156·86	81·45	92·55	138·40	127·38
5	2·81	2·85	5·42	6·35	5·28	4·96	27·50	7·68	7·87	4·38	5·02	4·13	5·24
10	1·79	1·81	1·82	3·03	2·44	2·26	12·50	2·26	3·31	2·98	3·22	2·25	2·61
15	2·55	2·48	2·61	3·75	2·77	2·60	13·20	4·12	4·75	4·08	3·22	2·70	3·19
20	3·70	3·86	3·78	6·99	5·04	5·07	16·90	6·19	8·30	9·07	6·41	5·16	5·46
25	4·48	4·04	4·54	7·52	5·13	4·92	20·30	6·85	8·38	8·78	6·28	5·56	6·22
30	5·19	4·47	5·66	7·86	5·56	4·75	23·50	6·67	7·87	7·57	6·04	6·20	7·31
35	6·33	5·28	7·32	9·42	6·97	5·37	27·80	7·06	8·69	7·35	6·37	7·54	9·14
40	8·16	6·89	9·31	11·04	9·22	6·79	32·30	8·48	10·40	7·78	7·57	9·83	10·40
45	10·83	9·38	12·23	13·63	12·44	8·98	37·20	10·31	13·28	8·92	9·25	13·08	13·10
50	13·95	11·87	16·57	17·01	16·93	11·77	42·80	13·45	17·75	11·11	11·24	17·88	15·28
55	18·16	17·07	23·08	21·53	23·57	16·86	49·90	17·73	24·48	14·16	15·26	24·85	21·38
60	25·84	23·89	32·62	30·84	32·60	24·29	59·80	26·62	35·06	19·14	20·66	35·43	29·90
65	38·59	34·03	45·57	44·30	47·06	37·20	75·50	39·83	51·21	28·80	30·04	50·42	42·92
70	61·62	53·63	67·08	68·32	69·36	57·43	101·70	64·49	74·45	42·76	46·40	73·93	59·90
75	96·10	80·79	100·62	108·70	106·40	89·21	148·00	102·62	107·50	66·91	74·60	108·89	90·15
80	137·95	131·97	141·63	167·80	157·87	137·00	228·70	169·78	155·80	106·34	120·81	166·92	133·66
85	197·01	191·64	203·15	230·50	231·60	204·00	366·30	251·60	225·80	164·09	192·27	232·16	195·04
90	277·36	290·48	295·66	276·80	320·02	290·00	545·50	358·74	327·20	235·78	286·99	317·20	261·48
95	381·11	..	369·66	341·50	413·99	600·00	..	517·41	474·00	329·32	398·02	425·31	339·81
100	525·36	..	449·69	460·00	496·68	..	..	..	686·90	458·00	495·00	675·97	436·52

TABLE XXXIV.

Foreign Countries—Females—Annual rate of Mortality per thousand.

Taken from the published Life Tables of various countries based on their official population and Death Statistics and exhibited here in tabular form so that a comparison may be made at each age.

Age.	Australia. 1901–1910.	Denmark. 1906–1910.	England. 1901–1910.	France. 1898–1903.	Germany. 1901–1910.	Holland. 1900–1909.	India. 1901–1910.	Italy. 1901–1910.	Japan. 1898–1903.	Norway. 1901–1910.	Sweden. 1901–1910.	Switzerland. 1901–1910.	United States. 1901–1910.
(1) *Females.*	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
0	97·53	97·71	117·43	136·49	170·48	117·69	284·60	152·11	140·92	66·79	75·98	112·58	105·51
5	2·58	2·57	5·53	6·49	5·31	4·63	26·20	8·50	8·10	4·28	5·16	4·06	5·00
10	1·59	2·08	1·99	3·28	2·56	2·28	12·90	2·90	3·77	3·19	3·25	2·26	2·36
15	2·19	2·91	2·58	4·47	3·02	3·21	13·40	4·89	6·38	4·58	4·19	3·81	3·09
20	3·29	3·78	3·25	6·27	4·22	3·84	17·00	6·48	9·64	6·13	5·26	5·40	4·90
25	4·30	4·44	3·86	7·35	5·37	4·48	20·00	7·33	9·92	6·66	5·96	6·18	5·91
30	5·19	4·87	4·84	7·59	5·97	5·17	23·10	7·58	9·98	6·93	6·12	6·63	6·87
35	6·17	5·50	6·17	8·20	6·86	5·97	26·60	7·89	10·67	7·43	6·50	7·22	7·77
40	7·18	6·23	7·66	8·79	7·71	7·10	30·80	8·54	11·38	7·73	7·00	8·22	8·54
45	8·07	7·34	9·70	10·03	8·54	7·64	35·30	8·80	11·49	8·06	7·68	9·07	10·27
50	9·56	8·97	12·67	12·44	11·26	10·09	40·60	10·66	13·80	9·46	9·11	12·34	12·78
55	12·77	11·87	17·98	16·32	16·19	13·37	47·40	14·44	18·52	11·94	11·96	17·53	18·08
60	19·20	17·44	25·39	24·36	24·73	20·75	57·80	23·26	26·50	16·11	16·60	27·01	25·53
65	29·98	28·20	35·34	36·64	39·60	32·36	74·40	37·54	39·87	24·12	24·92	43·27	37·33
70	47·77	46·18	56·43	58·50	62·06	51·74	101·20	64·07	60·72	37·13	40·32	67·14	54·72
75	77·79	72·06	86·43	94·54	98·31	81·62	146·00	103·74	92·00	60·72	67·02	104·03	81·13
80	113·33	119·06	124·29	146·70	146·50	127·80	224·90	168·42	137·20	96·29	109·48	154·71	122·14
85	164·59	170·35	182·03	206·70	217·39	188·30	362·80	247·27	204·50	150·31	173·55	220·16	178·61
90	242·21	257·06	257·81	240·60	295·66	270·00	590·70	356·92	304·80	218·48	252·73	309·20	246·87
95	341·45	..	330·96	275·70	368·57	560·00	..	521·98	454·40	311·60	360·75	402·96	324·90
100	500·73	..	405·44	329·00	420·77	1000·00	..	..	677·30	396·00	440·00	590·07	393·81

TABLE XXXV.

Foreign Countries—Males—Number of survivors out of 100,000 born alive.

Taken from the published Life Tables of various countries based on their official population and Death Statistics and exhibited here in tabular form so that a comparison may be made at each age.

Age.	Australia. 1901-1910.	Denmark. 1906-1910.	England. 1901-1910.	France. 1898-1903.	Germany. 1901-1910.	Holland. 1900-1909.	India. 1901-1910.	Italy. 1901-1910.	Japan. 1898-1903.	Norway. 1901-1910.	Sweden. 1901-1910.	Switzerland. 1901-1910.	United States. 1901-1910.
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
Males.													
0	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000
5	87,585	85,229	79,398	77,692	74,211	80,243	55,308	72,816	76,887	88,366	86,491	82,469	82,195
10	86,622	84,240	78,083	75,944	72,827	78,850	50,212	71,325	74,891	86,769	84,762	81,201	80,605
15	85,789	83,461	77,297	74,818	72,007	78,010	47,213	70,264	73,602	85,475	83,533	80,335	79,544
20	84,493	82,205	76,113	72,948	70,647	76,612	43,833	68,579	71,310	82,817	81,638	78,797	77,957
25	82,802	80,523	74,546	70,230	68,881	74,684	39,973	66,303	68,304	79,068	79,037	76,718	75,679
30	80,844	78,862	72,741	67,653	67,092	72,907	35,831	64,108	65,596	75,866	76,619	74,506	73,222
35	78,607	76,988	70,472	64,839	65,104	71,155	31,533	61,962	62,976	73,104	74,331	72,060	70,342
40	75,887	74,773	67,668	61,641	62,598	69,090	27,136	59,669	60,101	70,408	71,897	69,100	66,996
45	72,479	71,879	64,230	58,033	59,405	66,532	22,803	56,962	56,743	67,579	69,050	65,364	63,304
50	68,221	68,284	59,903	53,818	55,340	63,265	18,658	53,799	52,629	64,356	65,702	60,692	58,963
55	63,107	63,730	54,435	49,004	50,186	59,107	14,787	49,838	47,523	60,507	61,601	54,703	54,075
60	56,782	57,639	47,564	43,199	43,807	53,551	11,229	44,902	41,160	55,862	56,548	47,298	47,701
65	48,670	50,114	39,278	35,998	36,079	46,287	8,002	38,198	33,384	49,827	50,040	38,402	39,996
70	38,275	40,684	29,898	27,465	27,136	36,866	5,134	29,835	24,519	41,911	41,680	28,306	31,050
75	25,962	29,370	19,754	17,815	17,586	25,800	2,736	19,762	15,570	32,206	31,227	18,014	21,547
80	14,330	17,333	10,608	8,774	8,987	14,681	1,032	10,079	7,964	21,083	19,350	8,928	12,295
85	5,995	7,373	4,349	3,037	3,212	6,085	202	3,245	2,918	10,610	8,732	3,068	5,214
90	1,652	1,968	1,117	728	683	1,636	11	580	631	3,656	2,380	645	1,492
95	244	..	149	122	74	111	..	38	57	747	332	75	266
100	15	..	13	11	4	..	..	..	1	72	20	2	25

TABLE XXXVI.

Foreign Countries—Females—Number of survivors out of 100,000 born alive.

Taken from the published Life Tables of various countries based on their official population and Death Statistics and exhibited here in tabular form so that a comparison may be made at each age.

Age.	Australia. 1901-1910.	Denmark. 1906-1910.	England. 1901-1910.	France. 1898-1903.	Germany. 1901-1910.	Holland. 1900-1909.	India. 1901-1910.	Italy. 1901-1910.	Japan. 1898-1903.	Norway. 1901-1910.	Sweden. 1901-1910.	Switzerland. 1901-1910.	United States 1901-1910.
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
Females.													
0	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000
5	89,285	87,558	82,178	80,496	77,334	82,690	56,608	73,935	78,339	89,922	88,285	85,054	84,668
10	88,395	86,566	80,756	78,616	75,845	81,314	51,450	72,136	76,245	88,308	86,509	83,760	83,143
15	87,619	85,596	79,898	77,248	74,887	80,341	48,304	70,830	74,568	86,726	85,049	82,686	82,129
20	86,459	84,180	78,756	75,246	73,564	78,937	44,828	68,891	71,652	84,459	83,053	80,778	80,581
25	84,875	82,500	77,391	72,732	71,849	77,326	40,901	66,545	68,186	81,788	80,771	78,489	78,437
30	82,909	80,598	75,779	70,068	69,848	75,501	36,745	64,103	64,874	79,064	78,382	76,025	76,009
35	80,618	78,565	73,769	67,377	67,679	73,433	32,471	61,679	61,632	76,279	76,007	73,456	73,295
40	78,001	76,341	71,308	64,583	65,283	71,109	28,139	59,215	58,308	73,449	73,496	70,706	70,383
45	75,103	73,818	68,359	61,661	62,717	68,556	23,839	56,673	55,065	70,607	70,878	67,766	67,235
50	71,945	70,990	64,742	58,385	59,812	65,733	19,714	54,097	51,794	67,660	68,005	64,362	63,539
55	68,199	67,428	60,179	54,452	55,984	62,092	15,813	50,894	47,898	64,224	64,639	59,931	59,053
60	63,247	62,958	54,157	49,441	50,780	57,299	12,165	46,638	42,998	60,032	60,387	53,897	53,104
65	56,256	56,545	46,716	42,694	43,540	50,471	8,747	40,310	36,668	54,552	54,733	45,607	45,654
70	46,793	47,405	37,646	34,053	34,078	41,243	5,637	31,742	28,745	47,135	46,943	34,922	36,512
75	34,479	35,651	26,418	23,454	23,006	29,770	3,022	20,997	19,745	37,350	36,453	22,944	26,163
80	21,356	22,300	15,545	12,789	12,348	17,659	1,159	10,667	11,106	25,413	23,715	11,903	15,831
85	10,527	10,437	7,094	5,037	4,752	7,818	231	3,499	4,585	13,698	11,564	4,396	7,265
90	3,566	3,309	2,158	1,452	1,131	2,317	12	642	1,148	5,195	3,654	1,023	2,307
95	687	—	393	334	157	245	..	42	122	1,181	653	129	450
100	56	—	43	59	13	..	..	..	3	144	55	5	51

TABLE XXXVII.

Foreign Countries—Males—Complete expectation of life in years.

Taken from the published Life Tables of various countries based on their official population and Death Statistics and exhibited here in tabular form so that a comparison may be made at each age.

Age.	Australia. 1901—1910.	Denmark. 1906—1910.	England. 1901—1910.	France. 1898—1903.	Germany. 1901—1910.	Holland. 1900—1909.	India. 1901—1910.	Italy. 1901—1910.	Japan. 1898—1903.	Norway. 1901—1910.	Sweden. 1901—1910.	Switzerland. 1901—1910.	United States. 1901—1910.
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
Males.													
0	55·20	54·9	48·53	45·74	44·82	51·0	22·59	44·24	43·97	54·84	54·53	49·25	49·32
5	57·91	59·4	55·90	53·57	55·15	58·3	35·01	55·32	51·90	56·92	57·90	54·52	54·82
10	53·53	55·1	51·81	49·75	51·16	54·3	33·36	51·44	48·23	52·92	54·03	50·34	50·86
15	49·03	50·5	47·31	45·45	46·71	49·8	30·32	47·17	44·02	48·69	49·79	45·86	46·50
20	44·74	46·3	43·01	41·53	42·56	45·7	27·46	43·27	40·35	45·16	45·88	41·70	42·39
25	40·60	42·2	38·86	39·03	38·59	41·8	24·86	39·66	37·02	42·18	42·31	37·76	38·59
30	36·52	38·0	34·76	34·35	34·55	37·8	22·44	35·94	33·44	38·86	38·57	33·80	34·80
35	32·49	33·9	30·79	30·71	30·53	33·6	20·16	32·09	29·73	35·24	34·68	29·87	31·12
40	28·56	29·7	26·96	27·15	26·64	29·5	18·02	28·23	26·03	31·49	30·77	26·03	27·55
45	24·78	25·9	23·27	23·64	22·94	25·6	15·97	24·45	22·42	27·70	26·93	22·37	24·01
50	21·16	22·1	19·76	20·26	19·43	21·8	13·97	20·73	18·97	23·96	23·17	18·90	20·59
55	17·67	18·5	16·48	16·95	16·16	18·1	11·99	17·18	15·73	20·32	19·54	15·68	17·21
60	14·35	15·2	13·49	13·81	13·14	14·7	10·00	13·78	12·76	16·79	16·06	12·73	14·17
65	11·31	12·1	10·80	10·96	10·40	11·6	8·04	10·74	10·14	13·51	12·81	10·09	11·40
70	8·67	9·3	8·39	8·42	7·99	8·9	6·17	8·02	7·89	10·57	9·85	7·78	8·96
75	6·58	6·9	6·41	6·34	5·97	6·7	4·47	5·82	6·00	7·98	7·29	5·81	6·79
80	4·96	5·1	4·86	4·87	4·38	4·9	3·04	4·06	4·44	5·86	5·22	4·27	5·07
85	3·65	3·7	3·53	3·91	3·18	3·5	1·94	2·90	3·19	4·26	3·66	3·18	3·79
90	2·64	2·6	2·56	3·29	2·35	2·2	1·23	2·01	2·22	3·11	2·60	2·38	2·90
95	1·88	..	2·07	2·66	1·80	1·0	..	1·29	1·48	2·24	1·89	1·63	2·21
100	1·18	..	1·53	1·93	1·50	..	..	..	·50	1·50	1·45	1·00	1·66

TABLE XXXVIII.

Foreign Countries—Females—Complete expectation of life in years.

Taken from the published Life Tables of various countries based on their official population and Death Statistics and exhibited here in tabular form so that a comparison may be made at each age.

Age.	Australia. 1901—1910.	Denmark. 1906—1910.	England. 1901—1910.	France. 1898—1903.	Germany. 1901—1910.	Holland. 1900—1909.	India. 1901—1910.	Italy. 1901—1910.	Japan. 1898—1903.	Norway. 1901—1910.	Sweden. 1901—1910.	Switzerland. 1901—1919.	United States. 1901—1910.
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
Females.													
0	58·84	57·9	52·38	49·13	48·33	53·4	23·31	44·83	44·85	57·72	56·98	52·15	52·54
5	60·80	61·1	58·53	55·75	57·27	59·4	35·40	55·20	51·97	59·06	59·40	56·15	56·89
10	56·39	56·7	54·53	52·03	53·35	55·4	33·74	51·53	48·34	55·09	55·58	51·98	52·89
15	51·86	52·4	50·08	47·90	49·00	51·0	30·78	47·43	44·36	51·05	51·48	47·62	48·51
20	47·52	48·2	45·77	44·02	44·84	46·9	27·96	43·69	41·06	47·35	47·66	43·69	44·39
25	43·36	44·1	41·54	40·51	40·84	42·8	25·40	40·14	38·02	43·81	43·93	39·89	40·53
30	39·33	40·1	37·36	36·93	36·94	38·8	22·99	36·58	34·84	40·24	40·20	36·10	36·75
35	35·37	36·1	33·31	33·29	33·04	34·8	20·69	32·92	31·54	36·61	36·38	32·27	33·01
40	31·47	32·0	29·37	29·60	29·16	30·8	18·49	29·18	28·19	32·93	32·53	28·43	29·28
45	27·59	28·1	25·53	25·86	25·25	26·9	16·38	25·38	24·71	29·15	28·64	24·55	25·53
50	23·69	24·1	21·81	22·14	21·35	22·9	14·28	21·47	21·11	25·31	24·74	20·71	21·86
55	19·85	20·2	18·27	18·52	17·64	19·1	12·20	17·65	17·61	21·53	20·90	17·05	18·32
60	16·20	16·5	15·01	15·08	14·17	15·5	10·11	14·02	14·32	17·85	17·19	13·67	15·09
65	12·88	13·0	11·99	11·97	11·09	12·3	8·10	10·81	11·35	14·38	13·69	10·67	12·13
70	9·96	10·0	9·25	9·21	8·45	9·4	6·22	8·02	8·77	11·23	10·53	8·15	9·52
75	7·59	7·5	7·10	7·00	6·30	7·0	4·52	5·83	6·61	8·49	7·81	6·09	7·29
80	5·73	5·5	5·36	5·38	4·65	5·2	3·06	4·11	4·85	6·29	5·64	4·51	5·43
85	4·19	4·0	3·94	4·39	3·40	3·7	1·93	2·94	3·45	4·57	4·02	3·34	4·05
90	2·99	2·9	2·94	3·84	2·59	2·4	1·10	2·01	2·36	3·31	2·91	2·45	3·05
95	2·10	..	2·32	3·33	2·10	1·1	..	1·31	1·55	2·43	2·10	1·76	2·37
100	1·24	..	1·80	2·59	1·87	..	..	..	·83	1·81	1·70	1·10	1·90

TABLE—A.

LIFE TABLE—ALL INDIA.

Males.

Age.	Living at age x.	Dying between ages x and $x+1$.	Mortality per cent.	Living between ages x and $x+1$.	Living above age x.	Mean after life-time at age x.
(1)	(2)	(3)	(4)	(5)	(6)	(7)
0	100,000	24,874	24·87	85,443	2,690,881	26·91
1	75,126	6,896	9·18	71,352	2,605,438	34·68
2	68,230	3,850	5·64	66,174	2,534,086	37·14
3	64,380	2,524	3·92	63,037	2,467,912	38·33
4	61,856	1,695	2·74	60,954	2,404,875	38·88
5	60,161	1,159	1·93	59,551	2,343,921	38·96
6	59,002	853	1·45	58,576	2,284,370	38·72
7	58,149	669	1·15	57,814	2,225,794	38·28
8	57,480	539	·94	57,211	2,167,980	37·72
9	56,941	474	·83	56,704	2,110,769	37·07
10	56,467	447	·79	56,243	2,054,065	36·38
11	56,020	452	·81	55,794	1,997,822	35·66
12	55,568	465	·84	55,336	1,942,028	34·95
13	55,103	484	·88	54,861	1,886,692	34·24
14	54,619	507	·93	54,365	1,831,831	33·54
15	54,112	532	·98	53,846	1,777,466	32·85
16	53,580	558	1·04	53,301	1,723,620	32·17
17	53,022	583	1·10	52,731	1,670,319	31·50
18	52,439	607	1·16	52,135	1,617,588	30·85
19	51,832	629	1·21	51,518	1,565,453	30·20
20	51,203	649	1·27	50,878	1,513,935	29·57
21	50,554	668	1·32	50,220	1,463,057	28·94
22	49,886	684	1·37	49,544	1,412,837	28·32
23	49,202	700	1·42	48,852	1,363,293	27·71
24	48,502	715	1·47	48,145	1,314,441	27·10
25	47,787	730	1·53	47,422	1,266,296	26·50
26	47,057	747	1·59	46,683	1,218,874	25·90
27	46,310	767	1·66	45,927	1,172,191	25·31
28	45,543	792	1·74	45,147	1,126,264	24·73
29	44,751	820	1·83	44,341	1,081,117	24·16
30	43,931	850	1·93	43,506	1,036,776	23·60
31	43,081	875	2·03	42,643	993,270	23·06
32	42,206	897	2·13	41,758	950,627	22·52
33	41,309	915	2·22	40,851	908,869	22·00
34	40,394	933	2·31	39,928	868,018	21·49
35	39,461	950	2·41	38,986	828,090	20·99
36	38,511	965	2·51	38,028	789,104	20·49
37	37,546	980	2·61	37,056	751,076	20·00
38	36,566	995	2·72	36,069	714,020	19·53
39	35,571	1,008	2·83	35,067	677,951	19·06
40	34,563	1,017	2·94	34,054	642,884	18·60
41	33,546	1,023	3·05	33,035	608,830	18·15
42	32,523	1,026	3·15	32,010	575,795	17·70
43	31,497	1,029	3·27	30,982	543,785	17·26
44	30,468	1,029	3·38	29,954	512,803	16·83
45	29,439	1,027	3·49	28,925	482,849	16·40
46	28,412	1,025	3·61	27,900	453,924	15·98
47	27,387	1,020	3·72	26,877	426,024	15·56
48	26,367	1,013	3·84	25,860	399,147	15·14
49	25,354	1,006	3·97	24,851	373,287	14·72
50	24,348	998	4·10	23,849	348,436	14·31
51	23,350	988	4·23	22,856	324,587	13·90
52	22,362	975	4·36	21,875	301,731	13·49
53	21,387	962	4·50	20,906	279,856	13·09
54	20,425	949	4·65	19,950	258,950	12·68
55	19,476	936	4·81	19,008	239,000	12·27
56	18,540	923	4·98	18,079	219,992	11·87
57	17,617	909	5·16	17,162	201,913	11·46
58	16,708	895	5·36	16,261	184,751	11·06
59	15,813	880	5·57	15,373	168,490	10·66
60	14,933	864	5·79	14,501	153,117	10·25
61	14,069	848	6·03	13,645	138,616	9·85
62	13,221	832	6·29	12,805	124,971	9·45
63	12,389	816	6·59	11,981	112,166	9·05
64	11,573	800	6·91	11,173	100,185	8·66
65	10,773	783	7·27	10,381	89,012	8·26
66	9,990	766	7·67	9,607	78,631	7·87
67	9,224	748	8·11	8,850	69,024	7·48
68	8,476	730	8·61	8,111	60,174	7·10
69	7,746	710	9·17	7,391	52,063	6·72
70	7,036	687	9·76	6,693	44,672	6·35
71	6,349	665	10·47	6,016	37,979	5·98
72	5,684	640	11·26	5,364	31,963	5·62
73	5,044	613	12·08	4,738	26,599	5·27
74	4,431	583	13·16	4,139	21,861	4·93
75	3,848	549	14·27	3,574	17,722	4·61
76	3,299	512	15·52	3,043	14,148	4·29
77	2,787	470	16·86	2,552	11,105	3·98
78	2,317	425	18·34	2,104	8,553	3·69
79	1,892	378	19·98	1,703	6,449	3·41
80	1,514	330	21·80	1,349	4,746	3·13
81	1,184	283	23·90	1,043	3,397	2·87
82	901	238	26·42	782	2,354	2·61
83	663	195	29·41	565	1,572	2·37
84	468	152	32·48	392	1,007	2·15
85	316	114	36·08	259	615	1·95
86	202	80	39·44	162	356	1·76
87	122	53	43·29	96	194	1·59
88	69	33	47·61	52	98	1·42
89	36	19	52·41	27	46	1·28
90	17	10	57·70	12	19	1·12
91	7	4	63·46	5	7	1·00
92	3	2	69·70	2	2	·67
93	1	1	76·42	..	..	..

TABLE—B.

LIFE TABLE—ALL INDIA.

Females.

Age.	Living at age x.	Dying between ages x and $x+1$.	Mortality per cent.	Living between ages x and $x+1$.	Living above age x.	Mean after life-time at age x.
(1)	(2)	(3)	(4)	(5)	(6)	(7)
0	100,000	23,234	23·23	86,437	2,656,400	26·56
1	76,766	6,639	8·65	73,114	2,569,963	33·48
2	70,127	3,551	5·06	68,222	2,496,849	35·60
3	66,576	2,262	3·40	65,368	2,428,627	36·48
4	64,314	1,497	2·33	63,519	2,363,259	36·75
5	62,817	1,038	1·65	62,271	2,299,740	36·61
6	61,779	773	1·25	61,393	2,237,469	36·22
7	61,006	616	1·01	60,698	2,176,076	35·67
8	60,390	531	·88	60,125	2,115,378	35·03
9	59,859	490	·82	59,614	2,055,253	34·33
10	59,369	481	·81	59,128	1,995,639	33·61
11	58,888	494	·84	58,641	1,936,511	32·88
12	58,394	511	·88	58,139	1,877,870	32·16
13	57,883	540	·93	57,613	1,819,731	31·44
14	57,343	586	1·02	57,050	1,762,118	30·73
15	56,757	655	1·15	56,429	1,705,068	30·04
16	56,102	731	1·30	55,737	1,648,639	29·39
17	55,371	795	1·44	54,973	1,592,902	28·77
18	54,576	849	1·56	54,152	1,537,929	28·18
19	53,727	894	1·66	53,280	1,483,777	27·62
20	52,833	931	1·76	52,367	1,430,497	27·08
21	51,902	961	1·85	51,422	1,378,130	26·55
22	50,941	985	1·93	50,448	1,326,708	26·04
23	49,956	1,004	2·01	49,454	1,276,260	25·55
24	48,952	1,020	2·08	48,442	1,226,806	25·06
25	47,932	1,033	2·16	47,416	1,178,364	24·58
26	46,899	1,044	2·23	46,377	1,130,948	24·11
27	45,855	1,053	2·30	45,328	10,84,571	23·65
28	44,802	1,060	2·37	44,272	1,039,243	23·20
29	43,742	1,067	2·44	43,209	994,971	22·75
30	42,675	1,073	2·51	42,138	951,762	22·30
31	41,602	1,078	2·59	41,063	909,624	21·86
32	40,524	1,082	2·67	39,983	868,561	21·43
33	39,442	1,086	2·75	38,899	828,578	21·01
34	38,356	1,090	2·84	37,811	789,679	20·59
35	37,266	1,093	2·93	36,720	751,868	20·18
36	36,173	1,096	3·03	35,625	715,148	19·77
37	35,077	1,098	3·13	34,528	679,523	19·37
38	33,979	1,101	3·24	33,429	644,995	18·98
39	32,878	1,100	3·35	32,328	611,566	18·60
40	31,778	1,096	3·45	31,230	579,238	18·23
41	30,682	1,087	3·54	30,138	548,008	17·86
42	29,595	1,076	3·64	29,057	517,870	17·50
43	28,519	1,063	3·73	27,987	488,813	17·14
44	27,456	1,047	3·81	26,933	460,826	16·78
45	26,409	1,029	3·90	25,894	433,893	16·43
46	25,380	1,010	3·98	24,875	407,999	16·08
47	24,370	990	4·06	23,875	383,124	15·72
48	23,380	969	4·14	22,896	359,249	15·37
49	22,411	947	4·23	21,937	336,353	15·01
50	21,464	925	4·31	21,002	314,416	14·65
51	20,539	903	4·40	20,087	293,414	14·29
52	19,636	880	4·48	19,196	273,327	13·92
53	18,756	857	4·57	18,328	254,131	13·55
54	17,899	834	4·66	17,482	235,803	13·17
55	17,065	811	4·75	16,659	218,321	12·79
56	16,254	790	4·86	15,859	201,662	12·41
57	15,464	769	4·97	15,080	185,803	12·02
58	14,695	751	5·11	14,319	170,723	11·62
59	13,944	734	5·26	13,577	156,404	11·22
60	13,210	718	5·43	12,851	142,827	10·81
61	12,492	703	5·63	12,141	129,976	10·40
62	11,789	689	5·84	11,444	117,835	10·00
63	11,100	676	6·09	10,762	106,391	9·58
64	10,424	663	6·36	10,093	95,629	9·17
65	9,761	650	6·66	9,436	85,536	8·76
66	9,111	639	7·01	8,791	76,100	8·35
67	8,472	627	7·40	8,159	67,309	7·94
68	7,845	615	7·84	7,537	59,150	7·54
69	7,230	603	8·33	6,929	51,613	7·14
70	6,627	589	8·88	6,332	44,684	6·74
71	6,038	574	9·51	5,751	38,352	6·35
72	5,464	559	10·23	5,185	32,601	5·97
73	4,905	542	11·04	4,634	27,416	5·59
74	4,363	522	11·96	4,102	22,782	5·22
75	3,841	500	13·01	3,591	18,680	4·86
76	3,341	474	14·18	3,104	15,089	4·52
77	2,867	445	15·53	2,644	11,985	4·18
78	2,422	414	17·10	2,215	9,341	3·86
79	2,008	377	18·78	1,820	7,126	3·55
80	1,631	337	20·66	1,462	5,306	3·25
81	1,294	296	22·85	1,146	3,844	2·97
82	908	253	25·36	872	2,698	2·70
83	745	210	28·18	640	1,826	2·45
84	535	168	31·31	451	1,186	2·22
85	367	128	34·76	303	735	2·00
86	239	92	38·51	193	432	1·81
87	147	63	42·58	115	239	1·63
88	84	39	46·97	65	124	1·48
89	45	23	51·66	33	59	1·31
90	22	12	56·67	16	26	1·18
91	10	6	61·99	7	10	1·00
92	4	3	67·63	3	3	·75
93	1	1	73·57	..	..	..

TABLE—C.

LIFE TABLE—BENGAL, ASSAM AND SIKKIM.

Males.

Age.	Living at age x.	Dying between ages x and $x+1$.	Mortality per cent.	Living between ages x and $x+1$.	Living above age x.	Mean after life-time at age x.
(1)	(2)	(3)	(4)	5)	(6)	(7)
6	100,000	24,956	24·96	85,397	2,491,271	24·91
1	75,044	6,954	9·27	71,248	2,405,874	32·06
2	68,090	3,960	5·82	65,978	2,334,626	34·29
3	64,130	2,635	4·11	62,732	2,268,648	35·38
4	61,495	1,826	2·97	60,532	2,205,916	35·87
5	59,669	1,323	2·22	58.976	2,145,384	35·95
6	58,346	1,008	1·73	57,842	2,086,408	35·76
7	57,338	812	1·42	56,932	2,028,566	35·38
8	56,526	690	1·22	56,181	1,971,634	34·88
9	55,836	616	1·10	55,528	1,915,453	34·30
10	55,220	572	1·04	54,934	1,859,925	33·68
11	54,648	550	1·01	54,373	1,804,991	33·03
12	54,098	546	1·01	53,825	1,750,618	32·36
13	53,552	552	1·03	53,276	1,696,793	31·68
14	53,000	564	1·06	52,718	1,643,517	31·01
15	52.436	580	1·11	52,146	1,590,799	30·34
16	51,856	599	1·15	51,557	1,538,653	29·67
17	51,257	620	1·21	50,947	1,487,096	29·01
18	50,637	640	1·26	50,317	1,436,149	28·36
19	49,997	660	1·32	49.667	1,385,832	27·72
20	49,337	681	1·38	48,996	1,336,165	27·08
21	48,656	703	1·45	48,305	1,287,169	26·45
22	47,953	728	1·52	47,589	1,238,864	25·83
23	47,225	757	1·60	46,846	1,191,275	25·23
24	46,468	791	1·70	46,073	1,144,429	24·63
25	45,677	829	1·81	45.262	1,098,356	24·05
26	44,848	867	1·93	44,415	1,053,094	23·48
27	43,981	903	2·05	43,529	1,008,679	22·93
28	43,078	·936	2·17	42,610	965,150	22·40
29	42,142	966	2·29	41,659	922,540	21·89
30	41,176	992	2·41	40,680	880,881	21·39
31	40,184	1,017	2·53	39,676	840,201	20·91
32	39,167	1,039	2·65	38,647	800,525	20·44
33	38,128	1,057	2·77	37,600	761,878	19·98
34	37,071	1,073	2·89	36,534	724,278	19·54
35	35,998	1,087	3·02	35,455	687,744	19·11
36	34,911	1,097	3·14	34,362	652,289	18·68
37	33,814	1,106	3·27	33,261	617,927	18·27
38	32,708	1,111	3·40	32.153	584,666	17·88
39	31,597	1,114	3·52	31,040	552,513	17·49
40	30,483	1,113	3·65	29,926	521,473	17·11
41	29,370	1,108	3·77	28,816	491,547	16·74
42	28,262	1,100	3·89	27,712	462,731	16·37
43	27,162	1,090	4·01	26,617	435,019	16·02
44	26,072	1,076	4·13	25,534	408,402	15·66
45	24,996	1,061	4·25	24,466	382,868	15·32
46	23,935	1,044	4·36	23,413	358,402	14·97
47	22,891	1,022	4·46	22,380	334,989	14·63
48	21,869	1,000	4·57	21,369	312,609	14·29
49	20,869	978	4·69	20,380	291,240	13·96
50	19,891	956	4·81	19,413	270,860	13·62
51	18,935	934	4·93	18,468	251,447	13·28
52	18,001	910	5·06	17,546	232,979	12·94
53	17,091	886	5·18	16,648	215,433	12·61
54	16,205	860	5·31	15,775	198,785	12·27
55	15,345	833	5·43	14,928	183,010	11·93
56	14,512	806	5·55	14,109	168,082	11·58
57	13,706	780	5·69	13,316	153,973	11·23
58	12,926	754	5·83	12,549	140,657	10·88
59	12,172	729	5·99	11,808	128,108	10·52
60	11,443	706	6·17	11,090	116,300	10·16
61	10,737	684	6·37	10,395	105,210	9·80
62	10,053	662	6·59	9,722	94,815	9·43
63	9.391	640	6·82	9.071	85,093	9·09
64	8,751	618	7·06	8,442	76,022	8·66
65	8,133	598	7·35	7,834	67,580	8·31
66	7,535	578	7·67	7,246	59,746	7·93
67	6,957	558	8·02	6,678	52,500	7·55
68	6,399	538	8·41	6,130	45,822	7·16
69	5,861	520	8·87	5,601	39,692	6·77
70	5,341	503	9·42	5,089	34,091	6·38
71	4,838	486	10·05	4,595	29,002	5·99
72	4.352	469	10·78	4,118	24,407	5·61
73	3,883	453	11·67	3,656	20,289	5·23
74	3,430	437	12·74	3,212	16,633	4·85
75	2,993	421	14·07	2,782	13,421	4·48
76	2,572	401	15·59	2,372	10,639	4·14
77	2,171	374	17·23	1,984	8,267	3·81
78	1,797	342	19·03	1,626	6.283	3·50
79	1,455	307	21·10	1,301	4,657	3·20
80	1,148	269	23·43	1,014	3,356	2·92
81	879	229	26·05	764	2,342	2·66
82	650	188	28·92	556	1,578	2· 3
83	462	148	32·03	388	1,022	2·21
84	314	110	35·03	259	634	2·02
85	204	78	38·43	165	375	1·84
86	126	53	42·03	100	210	1·67
87	73	33	45·85	56	110	1·51
88	40	20	49·88	30	54	1·35
89	20	11	54·12	15	24	1·20
90	9	5	58·57	6	9	·00
91	4	3	63·24	3	3	·75
92	1	1	68·12	..	..	

TABLE—D.

LIFE TABLE—BENGAL, ASSAM AND SIKKIM.

Females.

Age.	Living at age x.	Dying between ages x and $x+1$.	Mortality per cent.	Living between ages x and $x+1$.	Living above age x.	Mean after life-time at age x.
(1)	(2)	(3)	(4)	(5)	(6)	(7)
0	100,000	23,356	23·36	86,324	2,479,720	24·80
1	76,644	6,438	8·40	73,126	2,393,396	31·23
2	70,206	3,636	5·18	68,265	2,320,270	33·05
3	66,570	2,405	3·61	65,292	2,252,005	33·83
4	64,165	1,655	2·58	63,293	2,186,713	34·08
5	62,510	1,209	1·93	61,880	2,123,420	33·97
6	61,301	950	1·55	60,826	2,061,540	33·63
7	60,351	783	1·30	59,960	2,000,714	33·15
8	59,568	696	1·17	59,220	1,940,754	32·58
9	58,872	649	1·11	58,547	1,881,531	31·96
10	58,223	624	1·07	57,911	1,822,987	31·31
11	57,599	628	1·09	57,285	1,765,076	30·64
12	56,971	652	1·14	56,645	1,707,791	29·98
13	56,319	688	1·22	55,975	1,651,146	29·32
14	55,631	733	1·32	55,265	1,595,171	28·67
15	54,898	782	1·42	54,507	1,539,906	28·05
16	54,116	833	1·54	53,699	1,485,399	27·45
17	53,283	884	1·66	52,841	1,431,700	26·87
18	52,399	932	1·78	51,933	1,378,859	26·31
19	51,467	975	1·90	50,980	1,326,926	25·78
20	50,492	1,013	2·01	49,985	1,275,946	25·27
21	49,479	1,045	2·11	48,957	1,225,961	24·87
22	48,434	1,073	2·21	47,897	1,177,004	24·30
23	47,361	1,098	2·32	46,812	1,129,107	23·84
24	46,263	1,120	2·42	45,703	1,082,295	23·39
25	45,143	1,138	2·52	44,574	1,036,592	22·96
26	44,005	1,152	2·62	43,429	992,018	22·54
27	42,853	1,164	2·72	42,271	948,589	22·14
28	41,689	1,172	2·81	41,103	906,318	21·74
29	40,517	1,178	2·91	39,928	865,215	21·35
30	39,339	1,180	3·00	38,749	825,287	20·98
31	38,159	1,180	3·09	37,569	786,538	20·61
32	36,979	1,177	3·18	36,391	748,969	20·25
33	35,802	1,171	3·27	35,216	712,578	19·90
34	34,631	1,163	3·36	34,050	677,362	19·56
35	33,468	1,153	3·45	32,891	643,312	19·22
36	32,315	1,141	3·53	31,745	610,421	18·89
37	31,174	1,128	3·62	30,610	578,676	18·56
38	30,046	1,114	3·71	29,489	548,066	18·24
39	28,932	1,098	3·80	28,383	518,577	17·92
40	27,834	1,080	3·88	27,294	490,194	17·61
41	26,754	1,060	3·96	26,224	462,900	17·30
42	25,694	1,038	4·04	25,175	436,676	17·00
43	24,656	1,014	4·11	24,149	411,501	16·69
44	23,642	989	4·18	23,147	387,352	16·38
45	22,653	963	4·25	22,172	364,205	16·08
46	21,690	937	4·32	21,221	342,033	15·77
47	20,753	911	4·39	20,298	320,812	15·46
48	19,842	885	4·46	19,399	300,514	15·15
49	18,957	859	4·53	18,528	281,115	14·83
50	18,098	833	4·60	17,681	262,587	14·51
51	17,265	806	4·67	16,862	244,906	14·19
52	16,459	779	4·73	16,070	228,044	13·86
53	15,680	752	4·80	15,304	211,974	13·52
54	14,928	727	4·87	14,564	196,670	13·17
55	14,201	702	4·94	13,850	182,106	12·82
56	13,499	678	5·02	13,160	168,256	12·40
57	12,821	655	5·11	12,494	155,096	12·10
58	12,166	634	5·21	11,849	142,602	11·72
59	11,532	614	5·32	11,225	130,753	11·34
60	10,918	596	5·46	10,620	119,528	10·95
61	10,322	580	5·62	10,032	108,908	10·55
62	9,742	564	5·79	9,460	98,876	10·15
63	9,178	550	6·00	8,903	89,416	9·74
64	8,628	537	6·22	8,359	80,513	9·33
65	8,091	525	6·49	7,829	72,154	8·92
66	7,566	514	6·79	7,309	64,325	8·50
67	7,052	504	7·15	6,800	57,016	8·09
68	6,548	496	7·57	6,300	50,216	7·67
69	6,052	487	8·05	5,808	43,916	7·26
70	5,565	477	8·57	5,327	38,108	6·85
71	5,088	467	9·18	4,854	32,781	6·44
72	4,621	456	9·87	4,393	27,927	6·04
73	4,165	445	10·68	3,943	23,534	5·65
74	3,720	432	11·61	3,504	19,591	5·27
75	3,288	416	12·65	3,080	16,087	4·89
76	2,872	399	13·88	2,672	13,007	4·53
77	2,473	378	15·29	2,284	10,335	4·18
78	2,095	354	16·90	1,918	8,051	3·84
79	1,741	327	18·78	1,578	6,133	3·52
80	1,414	296	20·93	1,266	4,555	3·22
81	1,118	261	23·35	987	3,289	2·94
82	857	222	25·90	746	2,302	2·69
83	635	182	28·66	544	1,556	2·45
84	453	144	31·79	381	1,012	2·23
85	309	108	34·95	255	631	2·04
86	201	76	37·81	163	376	1·87
87	125	50	40·00	100	213	1·70
88	75	33	44·00	59	113	1·51
89	42	21	50·00	31	54	1·29
90	21	12	57·14	15	23	1·10
91	9	6	66·67	6	8	·89
92	3	2	79·84	2	2	·67
93	1	1	97·90	..	—	..

TABLE—E.

LIFE TABLE—BIHAR AND ORISSA.

Males.

Age.	Living at age x.	Dying between ages x and $x+1$.	Mortality per cent.	Living between ages x and $x+1$.	Living above age x.	Mean after life-time at age x.
(1)	(2)	(3)	(4)	(5)	(6)	(7)
0	100,000	23,745	23·75	86,144	2,888,060	28·88
1	76,255	6,830	8·96	72,504	2,801,916	36·74
2	69,425	3,681	5·30	67,446	2,729,412	39·31
3	65,744	2,294	3·49	64,513	2,661,966	40·49
4	63,450	1,453	2·29	62,672	2,597,453	40·94
5	61,997	935	1·51	61,498	2,534,781	40·89
6	61,062	619	1·01	60,753	2,473,283	40·50
7	60,443	434	·72	60,226	2,412,530	39·91
8	60,009	331	·55	59,843	2,352,304	39·20
9	59,678	282	·47	59,537	2,292,461	38·41
10	59,396	266	·45	59,263	2,232,924	37·59
11	59,130	275	·46	58,993	2,173,661	36·76
12	58,855	303	·51	58,703	2,114,668	35·93
13	58,552	341	·58	58,382	2,055,965	35·11
14	58,211	384	·66	58,019	1,997,583	34·32
15	57,827	429	·74	57,612	1,939,564	33·54
16	57,398	473	·82	57,162	1,881,952	32·79
17	56,925	516	·91	56,667	1,824,790	32·06
18	56,409	554	·98	56,132	1,768,123	31·34
19	55,855	585	1·05	55,562	1,711,991	30·65
20	55,270	611	1·11	54,965	1,656,429	29·97
21	54,659	634	1·16	54,342	1,601,464	29·30
22	54,025	655	1·21	53,697	1,547,122	28·64
23	53,370	674	1·26	53,033	1,493,425	27·98
24	52,696	692	1·31	52,350	1,440,392	27·33
25	52,004	709	1·36	51,650	1,388,042	26·69
26	51,295	726	1·42	50,932	1,336,392	26·05
27	50,569	744	1·47	50,197	1,285,460	25·42
28	49,825	763	1·53	49,443	1,235,263	24·79
29	49,062	783	1·60	48,671	1,185,820	24·17
30	48,279	803	1·66	47,877	1,137,149	23·55
31	47,476	827	1·74	47,063	1,089,272	22·94
32	46,649	854	1·83	46,222	1,042,209	22·34
33	45,795	882	1·93	45,354	995,987	21·75
34	44,913	913	2·03	44,456	950,633	21·17
35	44,000	945	2·15	43,528	906,177	20·59
36	43,055	978	2·27	42,566	862,649	20·04
37	42,077	1,012	2·41	41,571	820,083	19·49
38	41,065	1,045	2·54	40,542	778,512	18·96
39	40,020	1,072	2·68	39,484	737,970	18·44
40	38,948	1,095	2·81	38,401	698,486	17·93
41	37,853	1,115	2·95	37,295	660,085	17·44
42	36,738	1,134	3·09	36,172	622,790	16·95
43	35,604	1,151	3·23	35,029	586,618	16·48
44	34,453	1,165	3·38	33,870	551,589	16·01
45	33,288	1,172	3·52	32,702	517,719	15·55
46	32,116	1,179	3·67	31,527	485,017	15·10
47	30,937	1,182	3·82	30,346	453,490	14·66
48	29,755	1,184	3·98	29,163	423,144	14·22
49	28,571	1,185	4·15	27,978	393,981	13·79
50	27,386	1,184	4·32	26,794	366,003	13·36
51	26,202	1,179	4·50	25,613	339,209	12·95
52	25,023	1,172	4·68	24,437	313,596	12·53
53	23,851	1,164	4·88	23,269	289,159	12·12
54	22,687	1,153	5·08	22,110	265,890	11·72
55	21,534	1,140	5·30	20,964	243,780	11·32
56	20,394	1,126	5·52	19,831	228,816	11·22
57	19,268	1,110	5·76	18,713	202,985	10·53
58	18,158	1,093	6·02	17,612	184,272	10·15
59	17,065	1,075	6·30	16,527	166,660	9·77
60	15,990	1,056	6·60	15,462	150,133	9·39
61	14,934	1,035	6·93	14,417	134,671	9·02
62	13,899	1,011	7·28	13,393	120,254	8·65
63	12,888	986	7·65	12,395	106,861	8·29
64	11,902	959	8·06	11,423	94,466	7·94
65	10,943	931	8·51	10,477	83,043	7·59
66	10,012	901	9·00	9,562	72,566	7·25
67	9,111	868	9·52	8,677	63,004	6·92
68	8,243	831	10·08	7,827	54,327	6·59
69	7,412	792	10·68	7,016	46,500	6·27
70	6,620	749	11·32	6,246	39,484	5·96
71	5,871	704	11·99	5,519	33,238	5·66
72	5,167	656	12·70	4,839	27,719	5·36
73	4,511	606	13·44	4,208	22,880	5·07
74	3,905	555	14·22	3,627	18,672	4·78
75	3,350	504	15·04	3,098	15,045	4·49
76	2,846	458	16·08	2,617	11,947	4·20
77	2,388	414	17·35	2,181	9,330	3·91
78	1,974	372	18·85	1,788	7,149	3·62
79	1,602	330	20·57	1,437	5,361	3·35
80	1,272	287	22·56	1,129	3,924	3·08
81	985	243	24·67	863	2,795	2·84
82	742	200	26·95	642	1,932	2·60
83	542	161	29·71	462	1,290	2·38
84	381	124	32·55	319	828	2·17
85	257	92	35·63	211	509	1·98
86	165	64	38·93	133	298	1·81
87	101	43	42·45	79	165	1·63
88	58	27	46·26	45	86	1·48
89	31	16	50·18	23	41	1·32
90	15	8	54·38	11	18	1·20
91	7	4	58·81	5	7	1·00
92	3	2	63·46	2	2	·67
93	1	1	68·34			..

TABLE—F.

LIFE TABLE—BIHAR AND ORISSA.

Females.

Age.	Living at age x.	Dying between ages x and $x+1$.	Mortality per cent.	Living between ages x and $x+1$.	Living above age x.	Mean after life-time at age x.
(1)	(2)	(3)	(4)	(5)	(6)	(7)
0	100,000	23,225	23·23	86,481	2,689,787	26·90
1	76,775	6,879	8·96	72,983	2,603,306	33·91
2	69,896	3,594	5·14	67,959	2,530,323	36·20
3	66,302	2,197	3·31	65,121	2,462,364	37·14
4	64,105	1,373	2·14	63,370	2,397,243	37·40
5	62,732	889	1·42	62,259	2,333,873	37·20
6	61,843	612	·99	61,537	2,271,614	36·73
7	61,231	457	·75	61,003	2,210,077	36·09
8	60,774	379	·62	60,584	2,149,074	35·36
9	60,395	354	·59	60,218	2,088,490	34·58
10	60,041	361	·60	59,861	2,028,272	33·78
11	59,680	392	·66	59,484	1,968,411	32·98
12	59,288	445	·75	59,065	1,908,927	32·20
13	58,843	511	·87	58,588	1,849,862	31·44
14	58,332	585	1·00	58,039	1,791,274	30·71
15	57,747	662	1·15	57,416	1,733,235	30·01
16	57,085	739	1·29	56,716	1,675,819	29·36
17	56,346	812	1·44	55,940	1,619,103	28·74
18	55,534	880	1·58	55,094	1,563,163	28·15
19	54,654	939	1·72	54,184	1,508,069	27·59
20	53,715	988	1·84	53,221	1,453,885	27·07
21	52,727	1,024	1·94	52,215	1,400,664	26·56
22	51,703	1,052	2·04	51,177	1,348,449	26·08
23	50,651	1,074	2·12	50,114	1,297,272	25·61
24	49,577	1,089	2·20	49,033	1,247,158	25·16
25	48,488	1,098	2·26	47,939	1,198,126	24·71
26	47,390	1,101	2·32	46,839	1,150,186	24·27
27	46,289	1,100	2·38	45,739	1,103,347	23·84
28	45,189	1,097	2·43	44,641	1,057,608	23·40
29	44,092	1,090	2·47	43,547	1,012,967	22·97
30	43,002	1,081	2·51	42,461	969,420	22·54
31	41,921	1,071	2·56	41,386	926,959	22·11
32	40,850	1,060	2·59	40,320	885,573	21·68
33	39,790	1,048	2·63	39,266	845,253	21·24
34	38,742	1,036	2·67	38,224	805,987	20·80
35	37,706	1,024	2·72	37,194	767,763	20·36
36	36,682	1,012	2·76	36,176	730,569	19·92
37	35,670	1,002	2·81	35,169	694,393	19·47
38	34,668	995	2·87	34,170	659,224	19·02
39	33,673	989	2·94	33,179	625,054	18·56
40	32,684	986	3·02	32,191	591,875	18·11
41	31,698	984	3·10	31,206	559,684	17·66
42	30,714	982	3·20	30,223	528,478	17·21
43	29,732	980	3·30	29,242	498,255	16·76
44	28,752	979	3·40	28,262	469,013	16·31
45	27,773	979	3·53	27,284	440,751	15·87
46	26,794	978	3·65	26,305	413,467	15·43
47	25,816	976	3·78	25,328	387,162	15·00
48	24,840	974	3·92	24,353	361,834	14·57
49	23,866	971	4·07	23,380	337,481	14·14
50	22,895	968	4·23	22,411	314,101	13·72
51	21,927	964	4·40	21,445	291,690	13·30
52	20,963	958	4·57	20,484	270,245	12·89
53	20,005	951	4·75	19,530	249,761	12·48
54	19,054	942	4·94	18,583	230,231	12·08
55	18,112	931	5·14	17,646	211,648	11·68
56	17,181	918	5·34	16,722	194,002	11·29
57	16,263	905	5·56	15,811	177,280	10·90
58	15,358	890	5·80	14,913	161,469	10·51
59	14,468	875	6·04	14,030	146,556	10·13
60	13,593	859	6·32	13,164	132,526	9·75
61	12,734	843	6·62	12,312	119,362	9·37
62	11,891	824	6·93	11,479	107,050	9·00
63	11,067	805	7·27	10,665	95,571	8·64
64	10,262	784	7·64	9,870	84,906	8·27
65	9,478	761	8·03	9,097	75,036	7·92
66	8,717	738	8·47	8,348	65,939	7·56
67	7,979	712	8·92	7,623	57,591	7·22
68	7,267	685	9·43	6,925	49,968	6·88
69	6,582	657	9·99	6,253	43,043	6·54
70	5,925	627	10·58	5,612	36,790	6·21
71	5,298	597	11·28	4,999	31,178	5·88
72	4,701	566	12·03	4,418	26,179	5·57
73	4,135	532	12·86	3,869	21,761	5·26
74	3,603	496	13·78	3,355	17,892	4·97
75	3,107	459	14·77	2,878	14,537	4·68
76	2,648	420	15·85	2,438	11,659	4·40
77	2,228	379	17·00	2,038	9,221	4·14
78	1,849	337	18·24	1,681	7,183	3·88
79	1,512	296	19·55	1,364	5,502	3·64
80	1,216	255	20·98	1,088	4,138	3·40
81	961	217	22·53	853	3,050	3·17
82	744	180	24·25	654	2,197	2·95
83	564	148	26·16	490	1,543	2·74
84	416	118	28·28	357	1,053	2·53
85	298	91	30·65	252	696	2·34
86	207	69	33·28	173	444	2·14
87	138	50	36·21	113	271	1·96
88	88	35	39·46	70	158	1·80
89	53	23	43·06	42	88	1·66
90	30	14	47·03	23	46	1·53
91	16	8	51·41	12	23	1·44
92	8	4	56·22	6	11	1·38
93	4	2	61·49	3	5	1·25
94	2	1	67·24	1	2	1·00
95	1	1	73·50	..	..	..

TABLE—G.

LIFE TABLE—BOMBAY.

Males.

Age.	Living at age x.	Dying between ages x and $x+1$.	Mortality per cent.	Living between ages x and $x+1$.	Living above age x.	Mean after life-time at age x.
(1)	(2)	(3)	(4)	(5)	(6)	(7)
0	100,000	23,850	23·85	86,086	2,783,652	27·84
1	76,150	6,919	9·09	72,368	2,697,566	35·42
2	69,231	3,869	5·59	67,159	2,625,198	37·92
3	65,362	2,470	3·78	64,037	2,558,039	39·14
4	62,892	1,586	2·52	62,052	2,494,002	39·66
5	61,306	1,094	1·78	60,724	2,431,950	39·67
6	60,212	745	1·24	59,840	2,371,226	39·38
7	59,467	538	0·90	59,198	2,311,386	38·87
8	58,929	423	0·72	58,717	2,252,188	38·22
9	58,506	365	0·62	58,324	2,193,471	37·49
10	58,141	350	0·60	57,966	2,135,147	36·72
11	57,791	362	0·63	57,610	2,077,181	35·94
12	57,429	386	0·67	57,236	2,019,571	35·17
13	57,043	425	0·75	56,830	1,962,335	34·40
14	56,618	474	0·84	56,381	1,905,505	33·66
15	56,144	516	0·92	55,886	1,849,124	32·94
16	55,628	554	1·00	55,351	1,793,238	32·24
17	55,074	591	1·07	54,779	1,737,887	31·56
18	54,483	621	1·14	54,172	1,683,108	30·89
19	53,862	650	1·21	53,537	1,628,936	30·24
20	53,212	677	1·27	52,874	1,575,399	29·61
21	52,535	700	1·33	52,185	1,522,525	28·98
22	51,835	719	1·39	51,475	1,470,340	28·37
23	51,116	739	1·45	50,747	1,418,865	27·76
24	50,377	758	1·50	49,998	1,368,118	27·16
25	49,619	776	1·56	49,231	1,318,120	26·56
26	48,843	793	1·62	48,446	1,268,889	25·98
27	48,050	810	1·69	47,645	1,220,443	25·40
28	47,240	826	1·75	46,827	1,172,798	24·83
29	46,414	842	1·81	45,993	1,125,971	24·26
30	45,572	858	1·88	45,143	1,079,978	23·70
31	44,714	874	1·95	44,277	1,034,835	23·14
32	43,840	890	2·03	43,395	990,558	22·59
33	42,950	905	2·11	42,498	947,163	22·05
34	42,045	920	2·19	41,585	904,665	21·52
35	41,125	935	2·27	40,657	863,080	20·99
36	40,190	949	2·36	39,716	822,423	20·46
37	39,241	963	2·45	38,759	782,707	19·95
38	38,278	976	2·55	37,790	743,948	19·44
39	37,302	989	2·65	36,808	706,158	18·93
40	36,313	1,001	2·76	35,812	669,350	18·43
41	35,312	1,011	2·86	34,807	633,538	17·94
42	34,301	1,019	2·97	33,791	598,731	17·46
43	33,282	1,025	3·08	32,770	564,940	16·97
44	32,257	1,029	3·19	31,742	532,170	16·50
45	31,228	1,033	3·31	30,712	500,428	16·02
46	30,195	1,037	3·43	29,676	469,716	15·56
47	29,158	1,041	3·57	28,638	440,040	15·09
48	28,117	1,045	3·72	27,594	411,402	14·63
49	27,072	1,048	3·87	26,548	383,808	14·18
50	26,024	1,051	4·04	25,499	357,260	13·72
51	24,973	1,052	4·21	24,447	331,761	13·28
52	23,921	1,053	4·40	23,394	307,314	12·85
53	22,868	1,053	4·61	22,342	283,920	12·42
54	21,815	1,049	4·81	21,290	261,578	11·99
55	20,766	1,043	5·03	20,245	240,288	11·57
56	19,723	1,036	5·25	19,205	220,043	11·16
57	18,687	1,026	5·49	18,174	200,838	10·75
58	17,661	1,015	5·75	17,153	182,664	10·34
59	16,646	1,003	6·03	16,145	165,511	9·94
60	15,643	989	6·32	15,148	149,366	9·55
61	14,654	973	6·64	14,168	134,218	9·16
62	13,681	955	6·98	13,203	120,050	8·77
63	12,726	935	7·35	12,259	106,847	8·40
64	11,791	913	7·74	11,334	94,588	8·02
65	10,878	889	8·17	10,434	83,254	7·65
66	9,989	863	8·64	9,557	72,820	7·29
67	9,126	835	9·15	8,709	63,263	6·93
68	8,291	805	9·70	7,888	54,554	6·58
69	7,486	772	10·31	7,100	46,666	6·23
70	6,714	739	11·00	6,345	39,566	5·89
71	5,975	703	11·77	5,623	33,221	5·56
72	5,272	665	12·61	4,940	27,598	5·23
73	4,607	624	13·55	4,295	22,658	4·92
74	3,983	581	14·58	3,692	18,363	4·61
75	3,402	534	15·71	3,135	14,671	4·31
76	2,868	486	16·96	2,625	11,536	4·02
77	2,382	437	18·36	2,164	8,911	3·74
78	1,945	387	19·92	1,751	6,747	3·47
79	1,558	337	21·65	1,390	4,996	3·21
80	1,221	288	23·58	1,077	3,606	2·95
81	933	240	25·77	813	2,529	2·71
82	693	196	28·22	595	1,716	2·48
83	497	154	31·00	420	1,121	2·26
84	343	117	34·12	284	701	2·04
85	226	85	37·62	184	417	1·85
86	141	59	41·54	111	233	1·65
87	82	38	45·92	63	122	1·49
88	44	22	50·79	33	59	1·34
89	22	12	56·18	16	26	1·18
90	10	6	62·13	7	10	1·00
91	4	3	68·67	3	3	·75
92	1	1	75·85	..	..	..

TABLE—H.

LIFE TABLE—BOMBAY.

Females.

Age.	Living at age x.	Dying between ages x and $x+1$.	Mortality per cent.	Living between ages x and $x+1$.	Living above age x.	Mean after life-time at age x.
(1)	(2)	(3)	(4)	(5)	(6)	(7)
0	100,000	23,450	23·45	86,270	2,637,235	26·37
1	76,550	6,482	8·47	73,013	2,550,965	33·32
2	70,068	3,708	5·29	68,092	2,477,952	35·36
3	66,360	2,482	3·74	65,045	2,409,860	36·31
4	63,878	1,735	2·72	62,965	2,344,815	36·71
5	62,143	1,279	2·06	61,476	2,281,850	36·72
6	60,864	1,001	1·64	60,364	2,220,374	36·48
7	59,863	826	1·38	59,450	2,160,010	36·08
8	59,037	719	1·22	58,677	2,100,560	35·58
9	58,318	658	1·13	57,989	2,041,883	35·01
10	57,660	625	1·08	57,348	1,983,894	34·41
11	57,035	615	1·08	56,727	1,926,546	33·78
12	56,420	624	1·11	56,108	1,869,819	33·14
13	55,796	645	1·16	55,474	1,813,711	32·51
14	55,151	675	1·22	54,813	1,758,237	31·88
15	54,476	710	1·30	54,121	1,703,424	31·27
16	53,766	746	1·39	53,393	1,649,303	30·68
17	53,020	782	1·48	52,629	1,595,910	30·10
18	52,238	815	1·56	51,831	1,543,281	29·54
19	51,423	844	1·64	51,001	1,491,450	29·00
20	50,579	867	1·71	50,145	1,440,449	28·48
21	49,712	885	1·78	49,270	1,390,304	27·97
22	48,827	898	1·84	48,378	1,341,034	27·47
23	47,929	911	1·90	47,473	1,292,656	26·97
24	47,018	921	1·96	46,558	1,245,183	26·48
25	46,097	929	2·02	45,632	1,198,625	26·00
26	45,168	935	2·07	44,701	1,152,993	25·53
27	44,233	939	2·12	43,763	1,108,292	25·06
28	43,294	941	2·17	42,824	1,064,529	24·59
29	42,353	943	2·23	41,881	1,021,705	24·12
30	41,410	944	2·28	40,938	979,824	23·66
31	40,466	944	2·33	39,994	938,886	23·20
32	39,522	944	2·39	39,050	898,892	22·74
33	38,578	943	2·44	38,107	859,842	22·29
34	37,635	942	2·50	37,164	821,735	21·83
35	36,693	941	2·56	36,222	784,571	21·38
36	35,752	940	2·63	35,282	748,349	20·93
37	34,812	939	2·70	34,343	713,067	20·48
38	33,873	937	2·77	33,464	678,724	20·04
39	32,936	936	2·84	32,468	645,320	19·59
40	32,000	934	2·92	31,533	612,852	19·15
41	31,066	929	2·99	30,602	581,319	18·71
42	30,137	924	3·07	29,675	550,717	18·27
43	29,213	920	3·15	28,753	521,042	17·84
44	28,293	913	3·23	27,836	492,289	17·40
45	27,380	907	3·31	26,927	464,453	16·96
46	26,473	900	3·40	26,023	437,526	16·53
47	25,573	893	3·49	25,126	411,503	16·09
48	24,680	886	3·59	24,237	386,377	15·66
49	23,794	880	3·70	23,354	362,140	15·22
50	22,914	875	3·82	22,477	338,786	14·79
51	22,039	869	3·94	21,604	316,309	14·35
52	21,170	860	4·06	20,740	294,705	13·92
53	20,310	852	4·20	19,884	273,965	13·49
54	19,458	844	4·34	19,036	254,081	13·06
55	18,614	835	4·48	18,197	235,045	12·63
56	17,779	826	4·65	17,366	216,848	12·20
57	16,953	817	4·82	16,544	199,482	11·77
58	16,136	810	5·02	15,731	182,938	11·34
59	15,326	802	5·23	14,925	167,207	10·91
60	14,524	794	5·47	14,127	152,282	10·48
61	13,730	787	5·73	13,337	138,155	10·06
62	12,943	778	6·01	12,554	124,818	9·64
63	12,165	769	6·32	11,780	112,264	9·23
64	11,396	759	6·66	11,017	100,484	8·82
65	10,637	747	7·02	10,263	89,467	8·41
66	9,890	735	7·43	9,523	79,204	8·01
67	9,155	722	7·89	8,794	69,681	7·61
68	8,433	707	8·38	8,079	60,887	7·22
69	7,726	690	8·93	7,381	52,808	6·84
70	7,036	671	9·54	6,701	45,427	6·46
71	6,365	650	10·21	6,040	38,726	6·08
72	5,715	629	11·01	5,400	32,686	5·72
73	5,086	604	11·88	4,784	27,286	5·36
74	4,482	574	12·80	4,195	22,502	5·02
75	3,908	542	13·88	3,637	18,307	4·68
76	3,366	507	15·07	3,113	14,670	4·36
77	2,859	470	16·43	2,624	11,557	4·04
78	2,389	430	18·00	2,174	8,933	3·74
79	1,959	385	19·68	1,766	6,759	3·45
80	1,574	339	21·54	1,405	4,993	3·17
81	1,235	293	23·71	1,088	3,588	2·91
82	942	247	26·18	819	2,500	2·65
83	695	200	28·82	595	1,681	2·42
84	495	157	31·79	416	1,086	2·19
85	338	118	35·02	279	670	1·98
86	220	86	39·03	177	391	1·78
87	134	58	43·06	105	214	1·60
88	76	36	47·58	58	109	1·43
89	40	21	52·61	30	51	1·28
90	19	1	58·14	13	21	1·11
91	8	5	64·18	6	8	1·00
92	3	2	70·72	2	2	·67
93	1	1	77·77	..	..	

TABLE—I.

LIFE TABLE—BURMA.

Males.

Age.	Living at age x.	Dying between ages x and $x+1$.	Mortality per cent.	Living between ages x and $x+1$.	Living above age x.	Mean after life-time at age x.
(1)	(2)	(3)	(4)	(5).	(6)	(7)
0	100,000	22,300	22·30	87,026	3,060,866	30·61
1	77,700	6,707	8·63	74,025	2,973,840	38·57
2	70,993	3,690	5·20	69,015	2,899,815	40·85
3	67,303	2,351	3·49	66,046	2,830,800	42·06
4	64,952	1,523	2·35	64,140	2,674,754	42·57
5	63,429	1,008	1·59	62,893	2,700,614	42·58
6	62,421	688	1·10	62,056	2,637,721	42·26
7	61,733	497	·81	61,149	2,575,665	41·72
8	61,236	391	·64	61,040	2,514,516	41·06
9	60,845	338	·56	60,676	2,453,476	40·32
10	60,507	324	·54	60,345	2,392,800	39·55
11	60,183	352	·58	60,007	2,332,455	38·76
12	59,831	387	·65	59,638	2,272,448	37·98
13	59,444	427	·72	59,230	2,212,810	37·23
14	59,017	472	·80	58,781	2,153,580	36·49
15	58,545	512	·87	58,289	2,094,799	35·78
16	58,033	547	·94	57,759	2,036,510	35·09
17	57,486	577	1·00	57,198	1,978,751	34·42
18	56,909	602	1·06	56,608	1,921,553	33·77
19	56,307	622	1·10	55,996	1,864,945	33·12
20	55,685	637	1·14	55,367	1,808,949	32·49
21	55,048	650	1·18	54,723	1,753,582	31·86
22	54,398	660	1·21	54,068	1,698,859	31·23
23	53,738	668	1·24	53,404	1,644,791	30·61
24	53,070	673	1·27	52,734	1,591,387	29·99
25	52,397	679	1·30	52,057	1,538,653	29·37
26	51,718	687	1·33	51,375	1,486,596	28·74
27	51,031	697	1·37	50,682	1,435,221	28·12
28	50,334	710	1·41	49,979	1,384,539	27·51
29	49,624	725	1·46	49,261	1,334,560	26·89
30	48,899	745	1·52	48,527	1,285,299	26·28
31	48,154	770	1·60	47,769	1,236,772	25·68
32	47,384	802	1·69	46,983	1,189,003	25·09
33	46,582	839	1·80	46,162	1,142,020	24·52
34	45,743	875	1·91	45,306	1,095,858	23·96
35	44,868	908	2·02	44,414	1,050,552	23·41
36	43,960	938	2·13	43,491	1,006,138	22·89
37	43,022	963	2·24	42,540	962,647	22·38
38	42,059	981	2·33	41,569	920,107	21·88
39	41,078	993	2·42	40,582	878,538	21·39
40	40,085	1,000	2·49	39,585	837,956	20·90
41	39,085	995	2·55	38,587	798,371	20·43
42	38,090	990	2·60	37,595	759,784	19·95
43	37,100	985	2·66	36,608	722,189	19·47
44	36,115	980	2·71	35,625	685,581	18·98
45	35,135	975	2·78	34,647	649,956	18·50
46	34,160	970	2·84	33,675	615,309	18·01
47	33,190	964	2·90	32,708	581,634	17·52
48	32,226	957	2·97	31,748	548,926	17·03
49	31,269	951	3·04	30,793	517,178	16·54
50	30,318	947	3·12	29,845	486,385	16·04
51	29,371	944	3·21	28,899	456,540	15·54
52	28,427	942	3·31	27,956	427,641	15·04
53	27,485	941	3·42	27,014	399,685	14·54
54	26,544	940	3·54	26,074	372,671	14·04
55	25,604	941	3·68	25,134	346,597	13·54
56	24,663	943	3·82	24,191	321,463	13·03
57	23,720	946	3·99	23,247	297,272	12·53
58	22,774	951	4·18	22,299	274,025	12·03
59	21,823	957	4·39	21,345	251,726	11·53
60	20,866	965	4·62	20,383	230,381	11·04
61	19,901	974	4·89	19,414	209,998	10·55
62	18,927	984	5·20	18,435	190,584	10·07
63	17,943	994	5·54	17,446	172,149	9·59
64	16,949	1,005	5·93	16,447	154,703	9·13
65	15,944	1,014	6·36	15,437	138,256	8·67
66	14,930	1,009	6·76	14,425	122,819	8·23
67	13,921	1,004	7·21	13,419	108,394	7·79
68	12,917	1,001	7·75	12,417	94,975	7·35
69	11,916	998	8·38	11,417	82,558	6·93
70	10,918	992	9·09	10,422	71,141	6·52
71	9,926	982	9·89	9,435	60,719	6·12
72	8,944	964	10·78	8,462	51,284	5·73
73	7,980	939	11·77	7,510	42,822	5·37
74	7,041	906	12·87	6,588	35,312	5·02
75	6,135	863	14·07	5,704	28,724	4·68
76	5,272	811	15·38	4,866	23,020	4·37
77	4,461	749	16·79	4,087	18,154	4·07
78	3,712	679	18·30	3,372	14,067	3·79
79	3,033	607	20·02	2,730	10,695	3·53
80	2,426	528	21·74	2,162	7,965	3·28
81	1,898	447	23·57	1,674	5,803	3·06
82	1,451	370	25·50	1,266	4,129	2·85
83	1,081	298	27·53	932	2,863	2·65
84	783	232	29·66	667	1,931	2·47
85	551	176	31·90	463	1,264	2·29
86	375	129	34·34	311	801	2·14
87	246	90	36·69	201	490	1·99
88	156	61	39·23	125	289	1·85
89	95	40	41·89	75	164	1·73
90	55	25	44·64	43	89	1·62
91	30	14	47·50	23	46	1·53
92	16	8	50·46	12	23	1·44
93	8	4	53·53	6	11	1·38
94	4	2	56·70	3	5	1·25
95	2	1	59·97	2	2	1·00
96	1	1	63·35	..	..	..

TABLE—J.

LIFE TABLE—BURMA.

Females.

Age.	Living at age x.	Dying between ages x and $x+1$.	Mortality per cent.	Living between ages x and $x+1$.	Living above age x.	Mean after life-time at age x.
(1)	(2)	(3)	(4)	(5)	(6)	(7)
0	100,000	20,300	20·30	88,207	3,099,990	31·00
1	79,700	6,187	7·76	76,295	3,011,783	37·79
2	73,513	3,275	4·45	71,750	2,935,488	38·98
3	70,238	2,017	2·87	69,154	2,863,738	40·77
4	68,221	1,265	1·86	67,543	2,794,584	40·96
5	66,956	822	1·23	66,519	2,727,041	40·73
6	66,134	567	·86	65,848	2,660,522	40·23
7	65,567	424	·65	65,355	2,594,674	39·57
8	65,143	352	·54	64,967	2,529,319	38·83
9	64,791	329	·51	64,626	2,464,352	38·04
10	64,462	335	·52	64,295	2,399,726	37·23
11	64,127	365	·57	63,945	2,335,431	36·42
12	63,762	414	·65	63,550	2,271,486	35·62
13	63,348	476	·75	63,110	2,207,936	34·85
14	62,872	546	·87	62,599	2,144,826	34·11
15	62,326	619	·99	62,017	2,082,227	33·41
16	61,707	692	1·12	61,361	2,020,210	32·74
17	61,015	762	1·25	60,634	1,958,849	32·10
18	60,253	827	1·37	59,840	1,898,215	31·50
19	59,426	884	1·49	58,984	1,838,375	30·94
20	58,542	933	1·59	58,076	1,779,391	30·40
21	57,609	970	1·68	57,124	1,721,315	29·88
22	56,639	999	1·76	56,140	1,664,191	29·38
23	55,640	1,022	1·84	55,129	1,608,051	28·90
24	54,618	1,039	1·90	54,099	1,552,922	28·43
25	53,579	1,051	1·96	53,053	1,498,823	27·97
26	52,528	1,057	2·01	51,999	1,445,770	27·52
27	51,471	1,060	2·06	50,941	1,393,771	27·08
28	50,411	1,060	2·10	49,881	1,342,830	26·64
29	49,351	1,057	2·14	48,823	1,292,949	26·20
30	48,294	1,052	2·18	47,768	1,244,126	25·76
31	47,242	1,046	2·21	46,719	1,196,358	25·32
32	46,196	1,038	2·25	45,677	1,149,639	24·89
33	45,158	1,030	2·28	44,643	1,103,962	24·45
34	44,128	1,022	2·32	43,617	1,059,319	24·01
35	43,106	1,014	2·35	42,599	1,015,702	23·56
36	42,092	1,006	2·39	41,589	973,103	23·12
37	41,086	999	2·43	40,587	931,514	22·67
38	40,087	991	2·47	39,592	890,927	22·23
39	39,096	984	2·51	38,604	851,335	21·78
40	38,112	977	2·56	37,624	812,731	21·33
41	37,135	967	2·60	36,646	775,107	20·87
42	36,168	958	2·65	35,684	738,461	20·42
43	35,210	949	2·69	34,736	702,777	19·96
44	34,261	938	2·74	33,792	668,041	19·50
45	33,323	927	2·78	32,860	634,249	19·03
46	32,396	917	2·83	31,938	601,389	18·56
47	31,479	906	2·87	31,026	569,451	18·09
48	30,573	897	2·93	30,125	538,425	17·61
49	29,676	889	3·00	29,232	508,300	17·13
50	28,787	883	3·07	28,346	479,068	16·64
51	27,904	877	3·14	27,466	450,722	16·15
52	27,027	871	3·22	26,591	423,256	15·66
53	26,156	865	3·31	25,723	396,665	15·17
54	25,291	859	3·40	24,862	370,942	14·67
55	24,432	855	3·50	24,005	346,080	14·17
56	23,577	852	3·61	23,151	322,075	13·66
57	22,725	850	3·74	22,300	298,924	13·15
58	21,875	852	3·89	21,449	276,624	12·65
59	21,023	855	4·07	20,596	255,175	12·14
60	20,168	861	4·27	19,738	34,579	11·63
61	19,307	868	4·49	18,873	214,841	11·13
62	18,439	874	4·74	18,002	195,968	10·63
63	17,565	883	5·03	17,124	177,966	10·13
64	16,682	893	5·35	16,235	160,842	9·64
65	15,789	904	5·72	15,337	144,607	9·16
66	14,885	914	6·14	14,428	129,270	8·69
67	13,971	922	6·60	13,510	114,842	8·22
68	13,049	929	7·12	12,585	101,332	7·77
69	12,120	935	7·71	11,653	88,747	7·32
70	11,185	939	8·40	10,715	77,094	6·89
71	10,246	933	9·11	9,779	66,379	6·48
72	9,313	923	9·90	8,852	56,600	6·08
73	8,390	907	10·82	7,937	47,748	5·69
74	7,483	887	11·85	7,039	39,811	5·32
75	6,596	857	12·98	6,168	32,772	4·97
76	5,739	816	14·23	5,331	26,604	4·64
77	4,923	766	15·57	4,540	21,273	4·32
78	4,157	707	17·02	3,804	16,733	4·03
79	3,450	641	18·57	3,130	12,929	3 75
80	2,809	568	20·22	2,525	9,799	3·49
81	2,241	493	21·98	1,995	7,274	3·25
82	1,748	417	23·84	1,540	5,279	3·02
83	1,331	344	25·81	1,159	3,739	2·81
84	987	275	27·88	850	2,580	2·61
85	712	214	30·05	605	1,730	2·43
86	498	161	32·33	417	1,125	2·26
87	337	117	34·72	279	708	2·10
88	220	82	37·20	179	429	1·95
89	138	55	39·80	111	250	1·81
90	83	35	42·49	66	139	1·68
91	48	22	45·29	37	73	1·52
92	26	13	48·19	20	36	1·39
93	13	7	51·20	9	16	1·23
94	6	3	54·20	5	7	1·17
95	3	2	57·42	2	2	·67
96		1	60·74	..	..	..

TABLE—K.

LIFE TABLE—CENTRAL PROVINCES, BERAR AND HYDERABAD.

Males.

Age.	Living at age x.	Dying between ages x and $x+1$.	Mortality per cent.	Living between ages x and $x+1$.	Living above age x.	Mean after life-time at age x.
(1)	(2)	(3)	(4)	(5).	(6)	(7)
0	100,000	24,895	24·90	85,440	2,809,528	28·10
1	75,105	6,915	9·21	71,302	2,724,088	36·27
2	68,190	3,682	5·40	66,209	2,652,786	38·90
3	64,508	2,280	3·53	63,284	2,586,577	40·10
4	62,228	1,437	2·31	61,459	2,523,293	40·55
5	60,791	928	1·53	60,296	2,461,834	40·50
6	59,863	626	1·05	59,550	2,401,538	40·12
7	59,237	455	·77	59,010	2,341,988	39·54
8	58,782	367	·62	58,598	2,282,978	38·84
9	58,415	330	·56	58,250	2,224,380	38·08
10	58,085	325	·56	57,923	2,166,130	37·29
11	57,760	343	·59	57,588	2,108,207	36·50
12	57,417	378	·66	57,228	2,050,619	35·71
13	57,039	422	·74	56,828	1,993,391	34·95
14	56,617	469	·83	56,383	1,936,563	34·20
15	56,148	515	·92	55,890	1,880,180	33·49
16	55,633	560	1·01	55,353	1,824,290	32·79
17	55,073	603	1·09	54,772	1,768,937	32·12
18	54,470	639	1·17	54,150	1,714,165	31·47
19	53,831	669	1·24	53,497	1,660,015	30·84
20	53,162	693	1·30	52,815	1,606,518	30·22
21	52,469	714	1·36	52,112	1,553,703	29·61
22	51,755	730	1·41	51,390	1,501,591	29·01
23	51,025	745	1·46	50,653	1,450,201	28·42
24	50,280	759	1·51	49,900	1,399,548	27·84
25	49,521	773	1·56	49,135	1,349,648	27·25
26	48,748	787	1·61	48,354	1,300,513	26·68
27	47,961	799	1·67	47,562	1,252,159	26·11
28	47,162	812	1·72	46,756	1,204,597	25·54
29	46,350	825	1·78	45,937	1,157,841	24·98
30	45,525	842	1·85	45,104	1,111,904	24·42
31	44,683	859	1·92	44,254	1,066,800	23·87
32	43,824	880	2·01	43,384	1,022,546	23·33
33	42,944	902	2·10	42,493	979,162	22·80
34	42,042	925	2·20	41,579	936,669	22·28
35	41,117	951	2·31	40,642	895,090	21·77
36	40,166	977	2·43	39,677	854,448	21·27
37	39,189	999	2·55	38,690	814,771	20·79
38	38,190	1,019	2·67	37,680	776,081	20·32
39	37,171	1,034	2·78	36,654	738,401	19·86
40	36,137	1,044	2·89	35,615	701,747	19·42
41	35,093	1,050	2·99	34,568	666,132	18·98
42	34,043	1,052	3·09	33,517	631,564	18·55
43	32,991	1,050	3·18	32,466	598,047	18·13
44	31,941	1,044	3·27	31,419	565,581	17·71
45	30,897	1,036	3·35	30,379	534,162	17·29
46	29,861	1,025	3·43	29,349	503,783	16·87
47	28,836	1,011	3·51	28,330	474,434	16·45
48	27,825	996	3·58	27,327	446,104	16·03
49	26,829	981	3·66	26,339	418,777	15·61
50	25,848	965	3·73	25,365	392,438	15·18
51	24,883	948	3·81	24,409	367,073	14·75
52	23,935	930	3·89	23,470	342,664	14·32
53	23,005	91	3·96	22,550	319,194	13·87
54	22,094	892	4·04	21,648	296,644	13·43
55	21,202	874	4·12	20,765	274,996	12·97
56	20,328	857	4·22	19,899	254,231	12·51
57	19,471	841	4·32	19,051	234,332	12·03
58	18,630	826	4·43	18,217	215,281	11·56
59	17,804	813	4·57	17,397	197,064	11·07
60	16,991	804	4·73	16,589	179,667	10·57
61	16,187	799	4·94	15,788	163,078	10·07
62	15,388	799	5·19	14,988	147,290	9·57
63	14,589	802	5·50	14,188	132,302	9·07
64	13,787	810	5·88	13,382	118,114	8·57
65	12,977	822	6·34	12,566	104,732	8·07
66	12,155	836	6·88	11,737	92,166	7·58
67	11,319	851	7·52	10,894	80,429	7·11
68	10,468	865	8·26	10,035	69,535	6·64
69	9,603	876	9·13	9,165	59,500	6·20
70	8,727	883	10·11	8,286	50,335	5·77
71	7,844	880	11·22	7,404	42,049	5·36
72	6,964	868	12·46	6,530	34,645	4·97
73	6,096	843	13·82	5,674	28,115	4·61
74	5,253	804	15·31	4,851	22,441	4·27
75	4,449	753	16·92	4,073	17,590	3·95
76	3,696	690	18·66	3,351	13,517	3·66
77	3,006	617	20·52	2,697	10,166	3·38
78	2,389	538	22·50	2,120	7,469	3·13
79	1,851	456	24·62	1,623	5,349	2·89
80	1,395	375	26·85	1,208	3,726	2·67
81	1,020	298	29·21	871	2,518	2·47
82	722	229	31·70	607	1,647	2·28
83	493	169	34·31	409	1,040	2·11
84	324	120	37·05	264	631	1·95
85	204	81	39·91	163	367	1·80
86	123	53	42·90	97	204	1·66
87	70	32	46·01	54	107	1·53
88	38	19	49·24	28	53	1·39
89	19	10	52·61	14	25	1·32
90	9	5	56·09	7	11	1·22
91	4	2	59·70	3	4	1·00
92	2	1	63·44	1	1	·50
93	1	1	67·30	..	..	..

TABLE—L.

LIFE TABLE—CENTRAL PROVINCES, BERAR AND HYDERABAD.

Females.

Age.	Living at age x.	Dying between ages x and $x+1$.	Mortality per cent.	Living between ages x and $x+1$.	Living above age x.	Mean after life-time at age x.
(1)	(2)	(3)	(4)	(5)	(6)	(7)
0	100,000	22,758	22·76	86,702	2,820,506	28·21
1	77,242	6,398	8·28	73,722	2,733,804	35·39
2	70,844	3,378	4·77	69,019	2,660,082	37·55
3	67,466	2,029	3·01	66,372	2,591,063	38·41
4	65,437	1,243	1·90	64,770	2,524,691	38·58
5	64,194	794	1·24	63,772	2,459,921	38·32
6	63,400	549	·87	63,125	2,396,149	37·79
7	62,851	421	·67	62,641	2,333,024	37·12
8	62,430	368	·59	62,246	2,270,383	36·37
9	62,062	363	·58	61,880	2,208,137	35·58
10	61,699	386	·63	61,506	2,146,257	34·79
11	61,313	430	·70	61,038	2,084,751	34·00
12	60,883	490	·81	60,638	2,023,653	33·24
13	60,393	561	·93	60,113	1,963,015	32·50
14	59,832	636	1·06	59,514	1,902,902	31·80
15	59,196	711	1·20	58,840	1,843,388	31·14
16	58,485	784	1·34	58,093	1,784,548	30·51
17	57,701	853	1·48	57,275	1,726,455	29·92
18	56,848	914	1·61	56,391	1,669,180	29·36
19	55,934	966	1·73	55,451	1,612,789	28·83
20	54,968	1,007	1·83	54,464	1,557,338	28·33
21	53,961	1,040	1·93	53,441	1,502,874	27·85
22	52,921	1,065	2·01	52,389	1,449,433	27·39
23	51,856	1,086	2·09	51,313	1,397,044	26·94
24	50,770	1,102	2·17	50,219	1,345,731	26·51
25	49,668	1,113	2·24	49,111	1,295,512	26·08
26	48,555	1,120	2·31	47,995	1,246,401	25·67
27	47,435	1,123	2·37	46,874	1,198,406	25·26
28	46,312	1,123	2·43	45,750	1,151,532	24·86
29	45,189	1,120	2·48	44,629	1,105,782	24·47
30	44,069	1,116	2·53	43,511	1,061,153	24·08
31	42,953	1,109	2·58	42,399	1,017,642	23·69
32	41,844	1,100	2·63	41,294	975,243	23·31
33	40,744	1,090	2·68	40,199	933,949	22·92
34	39,654	1,080	2·72	39,114	893,750	22·54
35	38,574	1,069	2·77	38,039	854,636	22·16
36	37,505	1,058	2·82	36,976	816,597	21·77
37	37,447	1,046	2·87	35,924	779,621	21·39
38	35,401	1,034	2·92	34,884	743,697	21·01
39	34,367	1,021	2·97	33,857	708,813	20·62
40	33,346	1,008	3·02	32,842	674,956	20·24
41	32,338	994	3·07	31,841	642,114	19·86
42	31,344	979	3·12	30,854	610,273	19·47
43	30,365	962	3·17	29,884	579,419	19·08
44	29,403	942	3·20	28,932	549,535	18·69
45	28,461	920	3·23	28,001	520,603	18·29
46	27,541	900	3·27	27,091	492,602	17·89
47	26,641	880	3·30	26,201	465,511	17·47
48	25,761	862	3·35	25,330	439,310	17·05
49	24,899	847	3·40	24,476	413,980	16·63
50	24,052	834	3·47	23,635	389,504	16·19
51	23,218	821	3·54	22,807	365,869	15·76
52	22,397	808	3·61	21,993	343,062	15·32
53	21,589	795	3·68	21,192	321,069	14·87
54	20,794	782	3·76	20,403	299,877	14·42
55	20,012	769	3·84	19,627	279,474	13·97
56	19,243	756	3·93	18,865	259,847	13·50
57	18,487	744	4·02	18,115	240,982	13·04
58	17,743	735	4·14	17,376	222,867	12·56
59	17,008	728	4·28	16,644	205,491	12·08
60	16,280	724	4·45	15,918	188,847	11·60
61	15,556	722	4·64	15,195	172,929	11·12
62	14,834	722	4·87	14,473	157,734	10·63
63	14,112	721	5·11	13,751	143,261	10·15
64	13,391	721	5·38	13,031	129,510	9·67
65	12,670	722	5·70	12,309	116,479	9·19
66	11,948	724	6·06	11,586	104,170	8·72
67	11,224	727	6·48	10,860	92,584	8·25
68	10,497	729	6·94	10,133	81,724	7·79
69	9,768	730	7·47	9,403	71,591	7·33
70	9,038	728	8·05	8,674	62,188	6·88
71	8,310	724	8·71	7,948	53,514	6·44
72	7,586	717	9·45	7,227	45,566	6·01
73	6,869	707	10·29	6,516	38,339	5·58
74	6,162	695	11·28	5,814	31,823	5·16
75	5,467	679	12·43	5,128	26,009	4·76
76	4,788	660	13·78	4,458	20,881	4·36
77	4,128	636	15·41	3,810	16,423	3·98
78	3,492	607	17·38	3,188	12,613	3·61
79	2,885	570	19·77	2,600	9,425	3·27
80	2,315	523	22·59	2,054	6,825	2·95
81	1,792	463	25·83	1,560	4,77	2·66
82	1,329	386	29·08	1,136	3,211	2·42
83	943	305	32·32	791	2,075	2·20
84	638	227	35·56	524	1,284	2·01
85	411	159	38·80	332	760	1·85
86	252	106	42·04	199	428	1·70
87	146	66	45·29	113	229	1·57
88	80	39	48·53	60	116	1·45
89	41	21	51·77	31	56	1·37
90	20	11	55·01	14	25	1·25
91	9	5	58·26	7	11	1·22
92	4	2	61·50	3	4	1·00
93	2	1	64·74	1	1	·50
94	1	1	67·98	..	..	..

TABLE—M.

LIFE TABLE—MADRAS.

Males.

Age.	Living at age x.	Dying between ages x and $x+1$.	Mortality per cent.	Living between ages x and $x+1$.	Living above age x.	Mean after life-time at age x.
(1)	(2)	(3)	(4)	(5)	(6)	(7)
0	100,000	23,550	23·55	88,225	2,870,764	28·71
1	76,450	6,839	8·95	73,031	2,782,539	36·40
2	69,611	3,738	5·37	67,742	2,709,508	38·92
3	65,873	2,361	3·58	64,692	2,641,766	40·10
4	63,512	1,528	2·41	62,748	2,577,074	40·58
5	61,984	1,019	1·64	61,475	2,514,326	40·56
6	60,965	714	1·17	60,608	2,452,851	40·23
7	60,251	582	0·97	59,960	2,392,243	39·71
8	59,669	446	0·75	59,446	2,332,283	39·09
9	59,223	359	0·61	59,043	2,272,837	38·38
10	58,864	388	0·66	58.670	2,213,794	37·61
11	58,476	396	0·68	58,278	2,155,124	36·86
12	58,080	418	0·72	57,871	2,096,846	36·10
13	57,662	449	0·78	57,438	2,038,975	35·36
14	57,213	485	0·85	56,970	1,981,537	34·63
15	56 728	518	0·91	56,469	1,924,567	33·93
16	56,210	549	0·98	55,936	1,868,098	33·23
17	55,661	580	1·04	55,371	1,812,162	32·56
18	55,081	603	1·10	54,779	1,756,791	31·90
19	54,478	621	1·14	54,168	1,702,012	31·24
20	53,857	634	1·18	53,540	1,647,844	30·60
21	53,223	646	1·21	52,900	1,594,304	29·96
22	52,577	657	1·25	52,248	1,541,404	29·32
23	51,920	666	1·28	51,587	1,489,156	28·68
24	51,254	679	1·32	50,915	1,437,569	28·05
25	50,575	694	1·37	50,228	1,386,654	27·42
26	49,881	709	1·42	49,526	1,336,426	26·79
27	49,172	729	1·48	48,808	1,286,900	26·17
28	48,443	753	1·56	48,066	1,238,092	25·56
29	47,690	782	1·64	47,299	1,190,026	24·95
30	46,908	813	1·73	46,502	1,142,727	24·36
31	46,095	847	1·84	45,671	1,096,225	23·78
32	45,248	881	1·95	44,808	1,050,554	23·22
33	44,367	910	2·05	43,912	1,005,746	22·67
34	43,457	938	2·16	42,988	961,834	22·13
35	42,519	968	2·28	42,035	918,846	21·61
36	41,551	989	2·38	41,056	876,811	21·10
37	40,562	1,006	2·48	40,059	835,755	20·60
38	39,556	1,024	2·59	39,044	795,696	20·12
39	38,532	1,040	2·70	38,012	756,652	19·64
40	37,492	1,052	2·81	36,966	718,640	19·17
41	36,440	1,063	2·92	35,909	681,674	18·71
41	35,377	1,067	3·02	34,843	645,765	18·25
43	34,310	1,071	3·12	33,775	610,922	17·81
44	33,239	1,072	3·23	32,703	577,147	17·36
45	32,167	1,072	3·33	31,631	544,444	16·93
46	31,095	1,070	3·44	30,560	512,813	16·49
47	30,025	1,067	3·55	29,491	482,253	16·06
48	28,958	1,063	3·67	28,427	452,762	15·64
49	27,895	1,057	3·79	27,366	424,335	15·21
50	26,838	1,048	3·90	26,314	396,969	14·79
51	25,790	1,037	4·02	25,272	370,655	14·37
52	24,753	1,024	4·14	24,241	345,383	13·95
53	23,729	1,007	4·24	23,225	321,142	13·53
54	22,722	991	4·36	22,227	297,917	13·11
55	21,731	977	4·50	21,242	275,690	12·69
56	20,754	967	4·66	20,271	254,448	12·26
57	19,787	955	4·83	19,309	234,177	11·84
58	18,832	944	5·01	18,360	214,868	11·41
59	17,888	932	5·21	17,422	196,508	10·99
60	16,956	921	5·43	16,496	179,086	10·56
61	16,035	909	5·67	15,580	162,590	10·14
62	15,126	896	5·92	14,678	147,010	9·72
63	14,230	885	6·22	13,788	132,332	9·30
64	13,345	872	6·53	12,909	118,544	8·88
65	12,473	857	6·87	12,044	105,635	8·47
66	11,616	843	7·26	11,195	93,591	8·06
67	10,773	829	7·70	10,358	82,396	7·65
68	9,944	812	8·17	9,538	72,038	7·24
69	9,132	797	8·73	8,734	62,500	6·84
70	8,335	781	9·37	7,944	53,766	6·45
71	7,554	763	10·10	7,173	45,822	6·07
72	6,791	741	10·91	6,420	38,649	5·69
73	6,050	719	11·88	5,691	32,229	5·33
74	5,331	688	12·91	4,987	26,538	4·98
75	4,643	648	13·96	4,319	21,551	4·63
76	3,995	611	15·30	3,689	17,232	4·31
77	3,384	562	16·62	3,103	13,543	4·00
78	2,822	513	18·17	2,566	10,440	3·70
79	2,309	459	19·90	2,079	7,874	3·41
80	1,850	405	21·88	1,648	5,795	3·13
81	1,445	348	24·10	1,271	4,147	2·87
82	1,097	292	26·58	951	2,876	2·62
83	805	236	29·32	687	1,925	2·39
84	569	184	32·30	477	1,238	2·18
85	385	137	35·53	316	761	1·98
86	248	97	39·02	200	445	1·79
87	151	65	42·76	118	245	1·63
88	86	40	46·75	66	127	1·48
89	46	23	50·99	35	61	1·33
90	23	13	55·48	16	26	1·13
91	10	6	60·22	7	10	1·00
92	4	3	65·22	3	3	·75
93	1	1	70·46	..	..	..

TABLE—N.

LIFE TABLE—MADRAS.

Females.

Age.	Living at age x.	Dying between ages x and $x+1$.	Mortality per cent.	Living between ages x and $x+1$.	Living above age x.	Mean after life-time at age x.
(1)	(2)	(3)	(4)	(5)	(6)	(7)
0	100,000	21,456	21·46	89,272	3,003,486	30·04
1	78,544	6,198	7·89	75,445	2,914,214	37·10
2	72,346	3,186	4·40	70,753	2,838,769	39·24
3	69,160	1,893	2·74	68,214	2,768,016	40·02
4	67,267	1,143	1·70	66,695	2,699,802	40·14
5	66,124	743	1·12	65,753	2,633,107	39·82
6	65,381	514	·79	65,124	2,567,354	39·27
7	64,867	385	·59	64,674	2,502,230	38·57
8	64,482	323	·50	64,321	2,437,556	37·80
9	64,159	317	·50	64,000	2,373,235	36·99
10	63,842	323	·50	63,681	2,309,235	36·17
11	63,519	345	·54	63,346	2,245,554	35·35
12	63,174	381	·60	62,984	2,182,208	34·54
13	62,793	444	·71	62,571	2,119,224	33·75
14	62,349	510	·82	62,094	2,056,653	32·99
15	61,839	579	·94	61,549	1,994,559	32·25
16	61,260	649	1·06	60,936	1,933,010	31·55
17	60,611	714	1·18	60,254	1,872,074	30·89
18	59,897	772	1·29	59,511	1,811,820	30·25
19	59,125	822	1·39	58,714	1,752,309	29·64
20	58,303	871	1·49	57,867	1,693,595	29·05
21	57,432	903	1·57	56,981	1,635,728	28·48
22	56,529	929	1·64	56,064	1,578,747	27·87
23	55,600	952	1·71	55,124	1,522,683	27·39
24	54,648	974	1·78	54,161	1,467,559	26·85
25	53,674	990	1·85	53,179	1,413,398	26·33
26	52,684	1,005	1·91	52,182	1,360,219	25·82
27	51,679	1,022	1·98	51,168	1,308,037	25·31
28	50,657	1,034	2·04	50,140	1,256,869	24·81
29	49,623	1,045	2·11	49,100	1,206,729	24·32
30	48,578	1,054	2·17	48,051	1,157,629	23·83
31	47,524	1,062	2·24	46,993	1,109,578	23·35
32	46,462	1,070	2·30	45,927	1,062,585	22·87
33	45,392	1,076	2·37	44,854	1,016,658	22·40
34	44,316	1,081	2·44	43,776	971,804	21·93
35	43,235	1,086	2·51	42,692	928,028	21·47
36	42,149	1,092	2·59	41,603	885,336	21·01
37	41,057	1,097	2·67	40,508	843,733	20·55
38	39,960	1,102	2·76	39,409	803,225	20·10
39	38,858	1,106	2·85	38,305	763,816	19·66
40	37,752	1,108	2·94	37,198	725,511	19·22
41	36,644	1,109	3·04	36,090	688,313	18·78
42	35,535	1,109	3·12	34,980	652,223	18·35
43	34,426	1,102	3·20	33,875	617,243	17·93
44	33,324	1,095	3·29	32,777	583,368	17·51
45	32,229	1,088	3·38	31,685	550,591	17·08
46	31,141	1,080	3·47	30,601	518,906	16·66
47	30,061	1,072	3·57	29,525	488,305	16·24
48	28,989	1,063	3·67	28,457	458,780	15·83
49	27,926	1,054	3·77	27,399	430,323	15·41
50	26,872	1,043	3·88	26,351	402,924	14·99
51	25,829	1,032	4·00	25,313	376,573	14·58
52	24,797	1,018	4·11	24,288	351,260	14·17
53	23,779	1,003	4·22	23,277	326,972	13·75
54	22,776	988	4·34	22,282	303,695	13·33
55	21,788	973	4·47	21,302	281,413	12·92
56	20,815	959	4·61	20,335	260,111	12·50
57	19,856	945	4·76	19,384	239,776	12·08
58	18,911	931	4·92	18,445	220,392	11·65
59	17,980	918	5·11	17,521	201,947	11·23
60	17,062	905	5·30	16,610	184,426	10·81
61	16,157	893	5·53	15,710	167,816	10·39
62	15,264	881	5·77	14,824	152,106	9·97
63	14,383	869	6·04	13,948	137,282	9·54
64	13,514	857	6·34	13,086	123,334	9·13
65	12,657	845	6·68	12,234	110,248	8·71
66	11,812	833	7·05	11,396	98,014	8·30
67	10,979	819	7·46	10,569	86,618	7·89
68	10,160	804	7·91	9,757	76,049	7·49
67	9,354	788	8·42	8,960	66,292	7·09
70	8,566	770	8·99	8,181	57,332	6·69
71	7,796	751	9·63	7,421	49,151	6·30
72	7,045	730	10·36	6,680	41,730	5·92
73	6,315	707	11·20	5,961	35,050	5·55
74	5,608	682	12·16	5,267	29,089	5·19
75	4,926	652	13·24	4,600	23,822	4·84
76	4,274	618	14·46	3,965	19,222	4·50
77	3,656	578	15·81	3,367	15,257	4·17
78	3,078	533	17·32	2,812	11,890	3·86
79	2,545	485	19·06	2,302	9,078	3·57
80	2,060	433	21·02	1,844	6,776	3·29
81	1,627	377	23·17	1,438	4,932	3·03
82	1,250	318	25·44	1,091	3,494	2·80
83	932	258	27·68	803	2,403	2·58
84	674	202	29·97	573	1,606	2·38
85	472	155	32·84	395	1,033	2·19
86	317	113	35·65	260	638	2·01
87	204	78	38·24	165	378	1·85
88	126	52	41·27	100	213	1·57
89	74	34	45·95	58	113	1·53
90	41	20	48·78	30	55	1·34
91	20	11	55·00	15	25	1·25
92	9	5	56·53	6	10	1·11
93	4	2	60·51	3	4	1·00
94	2	1	64·67	1	1	·50
95	1	1	68·99	..	..	..

TABLE—O.

LIFE TABLE—PUNJAB.

Males.

Age.	Living at age x.	Dying between ages x and $x+1$.	Mortality per cent.	Living between ages x and $x+1$.	Living above age x.	Mean after life-time at age x.
(1)	(2)	(3)	(4)	(5)	(6)	(7)
0	100,000	23,975	23·98	86,009	2,804,650	28·05
1	76,025	6,950	9·14	72,233	2,718,641	35·76
2	69,075	3,964	5·74	66,960	2,646,408	38·31
3	65,111	2,620	4·02	63,719	2,579,448	39·62
4	62,491	1,784	2·86	61,547	2,515,729	40·26
5	60,707	1,255	2·07	60,046	2,454,182	40·43
6	59,452	913	1·54	58,995	2,394,136	40·27
7	58,539	697	1·19	58,191	2,335,141	39·89
8	57,842	563	·97	57,560	2,276,950	39·36
9	57,279	482	·84	57,038	2,219,390	38·75
10	56,797	437	·77	56,579	2,162,352	38·07
11	56,360	418	·74	56,151	2,105,773	37·36
12	55,942	422	·75	55,731	2,049,622	36·64
13	55,520	441	·79	55,299	1,993,891	35·91
14	55,079	467	·85	54,846	1,938,592	35·20
15	54,612	498	·91	54,363	1,883,746	34·49
16	54,114	530	·98	53,849	1,829,383	33·81
17	53,584	563	1·05	53,302	1,775,534	33·14
18	53,021	594	1·12	52,724	1,722,232	32·48
19	52,427	622	1·19	52,116	1,669,508	31·84
20	51,805	647	1·25	51,482	1,617,392	31·22
21	51,158	669	1·31	50,823	1,565,910	30·61
22	50,489	689	1·36	50,145	1,515,087	30·01
23	49,800	707	1·42	49,446	1,464,942	29·42
24	49,093	723	1·47	48,732	1,415,496	28·83
25	48,370	738	1·53	48,001	1,366,764	28·26
26	47,632	751	1·58	47,257	1,318,763	27·69
27	46,881	762	1·63	46,500	1,271,506	27·12
28	46,119	773	1·68	45,733	1,225,006	26·56
29	45,346	783	1·73	44,954	1,179,273	26·01
30	44,563	793	1·78	44,167	1,134,319	25·45
31	43,770	802	1·83	43,369	1,090,152	24·91
32	42,968	811	1·89	42,562	1,046,783	24·36
33	42,157	820	1·95	41,747	1,004,221	23·82
34	41,337	829	2·01	40,923	962,474	23·28
35	40,508	838	2·07	40,089	921,551	22·75
36	39,670	846	2·13	39,247	881,462	22·22
37	38,824	854	2·20	38,397	842,215	21·69
38	37,970	862	2·27	37,539	803,818	21·17
39	37,108	870	2·34	36,673	766,279	20·65
40	36,238	878	2·42	35,799	729,606	20·13
41	35,360	885	2·50	34,918	693,807	19·62
42	34,475	891	2·58	34,029	658,889	19·11
43	33,584	895	2·67	33,137	624,860	18·61
44	32,689	897	2·74	32,241	591,723	18·10
45	31,792	898	2·82	31,343	559,482	17·60
46	30,894	899	2·91	30,445	528,139	17·10
47	29,995	901	3·00	29,544	497,694	16·59
48	29,094	903	3·11	28,643	468,150	16·09
49	28,191	905	3·21	27,739	439,507	15·59
50	27,286	907	3·32	26,833	411,768	15·09
51	26,379	910	3·45	25,924	384,935	14·59
52	25,469	913	3·58	25,013	359,011	14·10
53	24,556	916	3·73	24,098	333,998	13·60
54	23,640	919	3·89	23,180	309,900	13·11
55	22,721	922	4·06	22,260	286,720	12·62
56	21,799	926	4·25	21,336	264,460	12·13
57	20,873	930	4·46	20,408	243,124	11·65
58	19,943	935	4·69	19,476	222,716	11·17
59	19,008	942	4·96	18,537	203,240	10·69
60	18,066	947	5·24	17,593	184,703	10·22
61	17,119	951	5·56	16,644	167,110	9·76
62	16,168	953	5·89	15,691	150,466	9·31
63	15,215	955	6·28	14,738	134,775	8·86
64	14,260	956	6·70	13,782	120,037	8·42
65	13,304	954	7·17	12,827	106,255	7·99
66	12,350	950	7·69	11,875	93,428	7·57
67	11,400	942	8·26	10,929	81,553	7·15
68	10,458	929	8·88	9,994	70,624	6·75
69	9,529	912	9·57	9,073	60,630	6·36
70	8,617	891	10·34	8,172	51,557	5·98
71	7,726	864	11·18	7,294	43,385	5·62
72	6,862	832	12·13	6,446	36,091	5·26
73	6,030	794	13·17	5,633	29,645	4·92
74	5,236	751	14·34	4,860	24,012	4·59
75	4,485	701	15·63	4,135	19,152	4·27
76	3,784	645	17·05	3,461	15,017	3·97
77	3,139	585	18·62	2,847	11,556	3·68
78	2,554	520	20·35	2,294	8,709	3·41
79	2,034	452	22·24	1,808	6,415	3·15
80	1,582	384	24·30	1,390	4,607	2·91
81	1,198	318	26·53	1,039	3,217	2·69
82	880	255	28·92	753	2,178	2·48
83	625	197	31·48	527	1,425	2·28
84	428	146	34·21	355	898	2·10
85	282	105	37·10	229	543	1·93
86	177	71	40·16	142	314	1·77
87	106	46	43·38	83	172	1·62
88	60	28	46·77	46	89	1·48
89	32	16	50·33	24	43	1·34
90	16	9	54·05	12	19	1·19
91	7	4	57·94	5	7	1·00
92	3	2	62·00	2	2	·67
93	1	1	66·22	..	..	..

TABLE—P.

LIFE TABLE—PUNJAB.

Females.

Age.	Living at age x.	Dying between ages x and $x+1$.	Mortality per cent.	Living between ages x and $x+1$.	Living above age x.	Mean after life-time at age x.
(1)	(2)	(3)	(4)	(5)	(6)	(7)
0	100,000	23,653	23·65	86,146	2,657,223	26·57
1	76,347	6,501	8·51	72,798	2,571,077	33·68
2	69,846	3,703	5·30	67,871	2,498,279	35·77
3	66,143	2,464	3·72	64,836	2,430,408	36·74
4	63,679	1,713	2·69	62,777	2,365,572	37·15
5	61,966	1,254	2·02	61,311	2,302,795	37·16
6	60,712	973	1·60	60,226	2,241,484	36·92
7	59,739	798	1·34	59,340	2,181,258	36·51
8	58,941	692	1·17	58,595	2,121,918	36·00
9	58,249	631	1·08	57,933	2,063,323	35·42
10	57,618	600	1·04	57,318	2,005,390	34·80
11	57,018	592	1·04	56,722	1,948,072	34·17
12	56,426	604	1·07	56,124	1,891,350	33·52
13	55,822	625	1·13	55,510	1,835,226	32·88
14	55,197	660	1·20	54,867	1,779,716	32·24
15	54,537	703	1·29	54,185	1,724,849	31·63
16	53,834	748	1·39	53,460	1,670,664	31·03
17	53,086	788	1·48	52,692	1,617,204	30·46
18	52,298	824	1·58	51,886	1,564,512	29·92
19	51,474	857	1·66	51,046	1,512,626	29·39
20	50,617	888	1·75	50,173	1 461,580	28·88
21	49,729	912	1·83	49,273	1,411,407	28·38
22	48,817	932	1·91	48,351	1,362,134	27·90
23	47,885	950	1·98	47,410	1,313,783	27·44
24	46,935	965	2·06	46,452	1,266,373	26·98
25	45,970	978	2·13	45,481	1,219,921	26·54
26	44,992	986	2·19	44,499	1,174,440	26·10
27	44,006	993	2·26	43,510	1,129,941	25·68
28	43,013	997	2·32	42,514	1,086,431	25·26
29	42,016	999	2·38	41,517	1,043,917	24·85
30	41,017	999	2·44	40,517	1,002,400	24·44
31	40,018	997	2·49	39,520	961,883	24·04
32	39,021	993	2·54	38,524	922,363	23·64
33	38,028	987	2·60	37,535	883,839	23·24
34	37,041	980	2·65	36,551	846,304	22·85
35	36,061	972	2·70	35,575	809,753	22·46
36	35,089	962	2·74	34,608	774,178	22·06
37	34,127	952	2·79	33,651	739,570	21·67
38	33,175	940	2·83	32,705	705,919	21·28
39	32,235	927	2·87	31,771	673,214	20·88
40	31,308	912	2·91	30,852	641,443	20·49
41	30,396	894	2·94	29,949	610,591	20·09
42	29,502	875	2·96	29,065	580,642	19·68
43	28,627	855	2·99	28,199	551,577	19·27
44	27,772	833	3·00	27,356	523,378	18·85
45	26,939	811	3·01	26,533	496,022	18·41
46	26,128	796	3·05	25,730	469,489	17·97
47	25,332	786	3·10	24,939	443,759	17·52
48	24,546	777	3·17	24,158	418,820	17·06
49	23,769	770	3·24	23,384	394,662	16·60
50	22,999	763	3·32	22,617	371,278	16·14
51	22,236	757	3·40	21,858	348,661	15·68
52	21,479	752	3·50	21,103	326,803	15·22
53	20,727	747	3·60	20,353	305,700	14·75
54	19,980	742	3·71	19,609	285,347	14·28
55	19,238	739	3·84	18,869	265,738	13·81
56	18,499	736	3·98	18,131	246,869	13·34
57	17,763	733	4·13	17,396	228,738	12·88
58	17,030	731	4·29	16,665	211,342	12·41
59	16,299	729	4·47	15,934	194,677	11·94
60	15,570	727	4·67	15,207	178,743	11·48
61	14,843	726	4·89	14,480	163,536	11·02
62	14,117	724	5·13	13,755	149,056	10·56
63	13,393	722	5·39	13,032	135,301	10·10
64	12,671	720	5·68	12,311	122,269	9·65
65	11,951	717	6·00	11,592	109,958	9·20
66	11,234	713	6·35	10,878	98,366	8·76
67	10,521	709	6·74	10,166	87,488	8·32
68	9,812	704	7·17	9,460	77,322	7·88
69	9,108	699	7·67	8,758	67,862	7·45
70	8,409	693	8·24	8,063	59,104	7·03
71	7,716	685	8·88	7,373	51,041	6·61
72	7,031	676	9·61	6,695	43,668	6·21
73	6,355	665	10·46	6,023	36,975	5·82
74	5,690	648	11·39	5,366	30,952	5·44
75	5,042	624	12·38	4,730	25,586	5·07
76	4,418	595	13·46	4,120	20,856	4·72
77	3,823	563	14·72	3,542	16,736	4·38
78	3,260	527	16·18	2,996	13,194	4·05
79	2,733	485	17·74	2,491	10,198	3·73
80	2,248	438	19·48	2,029	7,707	3·43
81	1,810	390	21·52	1,615	5,678	3·14
82	1,420	339	23·87	1,250	4,063	2·86
83	1,081	287	26·53	938	2,813	2·60
84	794	234	29·49	677	1,875	2·36
85	560	183	32·75	468	1,198	2·14
86	377	137	36·32	309	730	1·94
87	240	96	40·20	192	421	1·75
88	144	63	44·07	112	229	1·59
89	81	39	47·95	62	117	1·44
90	42	22	51·82	31	55	1·31
91	20	11	55·70	14	24	1·20
92	9	5	59·57	7	10	1·11
93	4	3	63·45	3	3	·75
94	1	1	67·32	..	..	

TABLE—Q.

LIFE TABLE—RAJPUTANA.

Males.

Age.	Living at age x.	Dying between ages x and $x+1$.	Mortality per cent.	Living between ages x and $x+1$.	Living above age x.	Mean after life-time at age x.
(1)	(2)	(3)	(4)	(5)	(6)	(7)
0	100,000	27,385	27·39	83,869	2,360,428	23·60
1	72,615	6,894	9·49	68,854	2,276,559	31·35
2	65,721	3,956	6·02	63,615	2,207,705	33·59
3	61,765	2,676	4·33	60,350	2,144,090	34·71
4	59,089	1,897	3·21	58,093	2,083,740	35·26
5	57,192	1,415	2·47	56,455	2,025,647	35·42
6	55,777	1,114	2·00	55,220	1,969,192	35·30
7	54,663	925	1·69	54,201	1,913,972	35·01
8	53,738	806	1·50	53,335	1,859,771	34·61
9	52,932	729	1·38	52,567	1,806,436	34·13
10	52,203	678	1·30	51,864	1,753,869	33·60
11	51,525	644	1·25	51,203	1,702,005	33·03
12	50,881	624	1·23	50,569	1,650,802	32·44
13	50,257	611	1·22	49,952	1,600,233	31·84
14	49,646	603	1·21	49,344	1,550,281	31·23
15	49,043	597	1·22	48,745	1,500,937	30·60
16	48,446	592	1·22	48,150	1,452,192	29·98
17	47,854	591	1·23	47,558	1,404,042	29·34
18	47,263	591	1·25	46,968	1,356,484	28·70
19	46,672	591	1·27	46,376	1,309,516	28·06
20	46,081	595	1·29	45,784	1,263,140	27·41
21	45,486	603	1·33	45,184	1,217,356	26·76
22	44,883	619	1·38	44,574	1,172,172	26·12
23	44,264	642	1·45	43,943	1,127,598	25·47
24	43,622	671	1·54	43,286	1,083,655	24·84
25	42,951	718	1·67	42,592	1,040,369	24·22
26	42,233	765	1·81	41,851	997,777	23·63
27	41,468	804	1·94	41,066	955,926	23·05
28	40,664	841	2·07	40,243	914,860	22·50
29	39,823	878	2·20	39,384	874,617	21·96
30	38,945	906	2·33	38,492	835,233	21·45
31	38,039	930	2·44	37,574	796,741	20·95
32	37,109	954	2·57	36,632	759,167	20·46
33	36,155	971	2·69	35,670	722,535	19·98
34	35,184	987	2·81	34,690	686,865	19·52
35	34,197	999	2·92	33,698	652,175	19·07
36	33,198	1,010	3·04	32,693	618,477	18·63
37	32,188	1,016	3·16	31,680	585,784	18·20
38	31,172	1,021	3·28	30,661	554,104	17·78
39	30,151	1,023	3·39	29,640	523,443	17·36
40	29,128	1,022	3·51	28,617	493,803	16·95
41	28,106	1,019	3·63	27,596	465,186	16·55
42	27,087	1,014	3·74	26,580	437,590	16·15
43	26,073	1,008	3·87	25,569	411,010	15·76
44	25,065	997	3·98	24,567	385,441	15·38
45	24,068	986	4·10	23,575	360,874	14·99
46	23,082	972	4·21	22,596	337,299	14·61
47	22,110	957	4·33	21,631	314,703	14·23
48	21,153	941	4·45	20,683	293,072	13·85
49	20,212	925	4·58	19,749	272,389	13·48
50	19,287	909	4·71	18,833	252,640	13·10
51	18,378	892	4·85	17,932	233,807	12·72
52	17,486	875	5·00	17,048	215,875	12·35
53	16,611	858	5·17	16,182	198,827	11·97
54	15,753	840	5·33	15,333	182,645	11·59
55	14,913	822	5·51	14,502	167,312	11·22
56	14,091	804	5·71	13,689	152,810	10·84
57	13,287	786	5·92	12,894	139,121	10·47
58	12,501	768	6·14	12,117	126,227	10·10
59	11,733	749	6·38	11,359	114,110	9·73
60	10,984	730	6·65	10,619	102,751	9·35
61	10,254	711	6·93	9,898	92,132	8·98
62	9,543	692	7·25	9,197	82,234	8·62
63	8,851	673	7·60	8,515	73,037	8·25
64	8,178	654	8·00	7,851	64,522	7·89
65	7,524	634	8·43	7,207	56,671	7·53
66	6,890	611	8·87	6,584	49,464	7·18
67	6,279	587	9·35	5,986	42,880	6·83
68	5,692	564	9·91	5,410	36,894	6·48
69	5,128	540	10·53	4,858	31,484	6·14
70	4,588	515	11·22	4,330	26,626	5·80
71	4,073	488	11·98	3,829	22,296	5·47
72	3,585	461	12·86	3,355	18,467	5·15
73	3,124	432	13·82	2,908	15,112	4·84
74	2,692	400	14·87	2,492	12,204	4·53
75	2,292	368	16·05	2,108	9,712	4·24
76	1,924	334	17·35	1,757	7,604	3·95
77	1,590	299	18·80	1,440	5,847	3·68
78	1,291	263	20·40	1,160	4,407	3·41
79	1,028	228	22·18	914	3,247	3·16
80	800	193	24·15	703	2,333	2·92
81	607	160	26·33	527	1,630	2·69
82	447	128	28·72	383	1,103	2·47
83	319	100	31·35	269	720	2·26
84	219	75	34·23	182	451	2·06
85	144	54	37·37	117	269	1·87
86	90	37	40·80	71	152	1·69
87	53	24	44·51	41	81	1·53
88	29	14	48·54	22	40	1·38
89	15	8	52·89	11	18	1·20
90	7	4	57·58	5	7	1·00
91	3	2	62·63	2	3	·67
92	1	1	68·04	..	..	..

TABLE—R.

LIFE TABLE—RAJPUTANA.

Females.

Age.	Living at age x.	Dying between ages x and $x+1$.	Mortality per cent.	Living between ages x and $x+1$.	Living above age x.	Mean after life-time at age x.
(1)	(2)	(3)	(4)	(5)	(6)	(7)
0	100,000	24,256	24·26	85,761	2,595,598	25·96
1	75,744	6,424	8·48	72,230	2,509,837	33·14
2	69,320	3,593	5·18	67,399	2,437,607	35·16
3	65,727	2,341	3·56	64,481	2,370,208	36·06
4	63,386	1,580	2·49	62,550	2,305,727	36·38
5	61,806	1,116	1·81	61,220	2,243,177	36·29
6	60,690	834	1·37	60,273	2,181,957	35·95
7	59,856	660	1·10	59,526	2,121,684	35·45
8	59,196	557	0·94	58,918	2,062,158	34·84
9	58,639	501	0·86	58,388	2,003,240	34·16
10	58,138	477	0·82	57,900	1,944,852	33·45
11	57,661	477	0·83	57,422	1,886,952	32·72
12	57,184	497	0·87	56,936	1,829,530	31·99
13	56,687	532	0·94	56,421	1,772,594	31·27
14	56,155	576	1·03	55,867	1,716,173	30·56
15	55,579	625	1·13	55,266	1,660,306	29·87
16	54,954	678	1·23	54,615	1,605,040	29·21
17	54,276	729	1·34	53,912	1,550,425	28·57
18	53,547	777	1·45	53,158	1,496,513	27·95
19	52,770	822	1·56	52,359	1,443,355	27·35
20	51,948	861	1·66	51,518	1,390,996	26·78
21	51,087	893	1·75	50,640	1,339,478	26·22
22	50,194	921	1·84	49,734	1,288,838	25·68
23	49,273	948	1·92	48,799	1,239,104	25·15
24	48,325	971	2·01	47,839	1,190,305	24·63
25	47,354	992	2·09	46,858	1,142,466	24·13
26	46,362	1,009	2·18	45,858	1,095,608	23·63
27	45,353	1,024	2·26	44,841	1,049,750	23·15
28	44,329	1,038	2·34	43,810	1,004,909	22·67
29	43,291	1,049	2·42	42,766	961,099	22·20
30	42,242	1,059	2·51	41,713	918,333	21·74
31	41,183	1,066	2·59	40,650	876,620	21·29
32	40,117	1,072	2·67	39,581	835,970	20·84
33	39,045	1,077	2·76	38,506	796,389	20·40
34	37,968	1,081	2·85	37,428	757,883	19·96
35	36,887	1,084	2·94	36,345	720,455	19·53
36	35,803	1,086	3·03	35,260	684,110	19·11
37	34,717	1,087	3·13	34,173	648,850	18·69
38	33,630	1,086	3·23	33,087	614,677	18·28
39	32,544	1,083	3·33	32,003	581,590	17·87
40	31,461	1,079	3·43	30,921	549,587	17·47
41	30,382	1,072	3·53	29,846	518,666	17·07
42	29,310	1,065	3·63	28,778	488,820	16·68
43	28,245	1,056	3·74	27,717	460,042	16·29
44	27,189	1,046	3·85	26,666	432,325	15·90
45	26,143	1,034	3·95	25,626	405,659	15·52
46	25,109	1,020	4·06	24,599	380,033	15·14
47	24,089	1,005	4·17	23,586	355,434	14·76
48	23,084	990	4·29	22,589	331,848	14·38
49	22,094	974	4·41	21,607	309,259	14·00
50	21,120	957	4·53	20,642	287,652	13·62
51	20,163	940	4·66	19,693	267,010	13·24
52	19,223	923	4·80	18,761	247,317	12·87
53	18,300	906	4·95	17,847	228,556	12·49
54	17,394	888	5·11	16,950	210,709	12·11
55	16,506	870	5·27	16,071	193,759	11·74
56	15,636	851	5·44	15,211	177,688	11·36
57	14,785	832	5·63	14,369	162,477	10·99
58	13,953	813	5·83	13,546	148,108	10·61
59	13,140	793	6·03	12,744	134,562	10·24
60	12,347	773	6·26	11,960	121,818	9·87
61	11,574	753	6·51	11,198	109,858	9·49
62	10,821	733	6·77	10,454	98,660	9·12
63	10,088	713	7·07	9,732	88,206	8·74
64	9,375	693	7·39	9,028	78,474	8·37
65	8,682	673	7·75	8,346	69,446	8·00
66	8,009	653	8·15	7,682	61,100	7·63
67	7,356	633	8·61	7,040	53,418	7·26
68	6,723	613	9·12	6,416	46,378	6·90
69	6,110	592	9·69	5,814	39,962	6·54
70	5,518	570	10·33	5,233	34,148	6·19
71	4,948	546	11·03	4,675	28,915	5·84
72	4,402	519	11·79	4,143	24,240	5·51
73	3,883	490	12·62	3,638	20,097	5·18
74	3,393	460	13·56	3,163	16,459	4·85
75	2,933	429	14·63	2,718	13,296	4·53
76	2,504	396	15·81	2,306	10,578	4·22
77	2,108	362	17·17	1,927	8,272	3·92
78	1,746	327	18·73	1,583	6,345	3·63
79	1,419	291	20·48	1,273	4,762	3·36
80	1,128	252	22·35	1,002	3,489	3·09
81	876	215	24·53	769	2,487	2·84
82	661	178	26·99	572	1,718	2·60
83	483	143	29·64	411	1,146	2·37
84	340	111	32·61	285	735	2·16
85	229	82	35·85	188	450	1·97
86	147	58	39·36	118	262	1·78
87	89	38	43·15	70	144	1·62
88	51	24	47·21	39	74	1·45
89	27	14	51·54	20	35	1·30
90	13	7	56·14	9	15	1·15
91	6	4	61·02	4	6	1·00
92	2	1	66·16	2	2	1·00
93	1	1	71·59	..	..	..

TABLE—S.

LIFE TABLE—N. W. F. P., SIND AND BALUCHISTAN.

Males.

Age.	Living at age x.	Dying between ages x and $x+1$.	Mortality per cent.	Living between ages x and $x+1$.	Living above age x.	Mean after life-time at age x.
(1)	(2)	(3)	(4)	(5)	(6)	(7)
0	100,000	26,013	26·01	86,994	2,542,761	25·43
1	73,987	6,912	9·34	70,531	2,455,767	33·19
2	67,075	3,805	5·67	65,172	2,385,236	35·56
3	63,270	2,426	3·83	62,057	2,320,064	36·67
4	60,844	1,608	2·64	60,040	2,258,007	37·11
5	59,236	1,117	1·89	58,678	2,197,967	37·11
6	58,119	826	1·42	57,706	2 139,289	36·81
7	57,293	678	1·18	56,954	2,081,583	36·33
8	56,615	598	1·06	56,316	2,024,629	35·76
9	56,017	533	·95	55,750	1,968,313	35·14
10	55,484	498	·90	55,235	1,912,563	34·47
11	54,986	488	·89	54,742	1,857,328	33·78
12	54,498	502	·92	54,247	1,802,586	33·08
13	53,996	521	·96	53,736	1,748,339	32·38
14	53,475	551	1·03	53,199	1,694,603	31·69
15	52,924	578	1·09	52,635	1,641,404	31·01
16	52,346	602	1·15	52,045	1,588,769	30·35
17	51,744	624	1·21	51,432	1,536,724	29·70
18	51,120	643	1·26	50,799	1,485,292	29·06
19	50,477	659	1·33	50,147	1,434,493	28·42
20	49,818	672	1·35	49,482	1,384,346	27·79
21	49,146	684	1·39	48,804	1,334,864	27·16
22	48,462	697	1·43	48,114	1,286,060	26·54
23	47,765	711	1·49	47,409	1,237,946	25·92
24	47,054	726	1·54	46,691	1,190,537	25·30
25	46,328	746	1·61	45,955	1,143,846	24·69
26	45,582	767	1·68	45,199	1,097,891	24·09
27	44,815	792	1·77	44,419	1,052,692	23·49
28	44,023	824	1·87	43,611	1,008,273	22·90
29	43,199	854	1·99	42,772	964,662	22·33
30	42,345	894	2·11	41,898	921,890	21·77
31	41,451	934	2·25	40,984	879,992	21·23
32	40,517	971	2·40	40,031	839,008	20·71
33	39,546	1,004	2·54	39,044	798,977	20·20
34	38,542	1,033	2·68	38,026	759,933	19·72
35	37,509	1,058	2·82	36,980	721,907	19·25
36	36,451	1,078	2·96	35,912	684,927	18·79
37	35,373	1,097	3·10	34,824	649,015	18·35
38	34,276	1,113	3·25	33,720	614,191	17·92
39	33,163	1,123	3·39	32,601	580,471	17·50
40	32,040	1,129	3·52	31,476	547,870	17·10
41	30,911	1,131	3·66	30,345	516,394	16·71
42	29,780	1,129	3·79	29,216	486,049	16·32
43	28,651	1,123	3·92	28,089	456,833	15·94
44	27,528	1,114	4·05	26,971	428,744	15·57
45	26,414	1,102	4·17	25,863	401,773	15·21
46	25,312	1,086	4·29	24,769	375,910	14·85
47	24,226	1,068	4·41	23,692	351,141	14·49
48	23,158	1,048	4·53	22,634	327,449	14·14
49	22,110	1,027	4·65	21,597	304,815	13·79
50	21,083	1,004	4·76	20,581	283,218	13·43
51	20,079	980	4·88	19,589	262,637	13·08
52	19,099	955	5·00	18,621	243,048	12·73
53	18,144	929	5·12	17,680	224,427	12·37
54	17,215	902	5·24	16,764	206,747	12·01
55	16,313	874	5·36	15,876	189,983	11·65
56	15,439	846	5·48	15,016	174,107	11·28
57	14,593	818	5·61	14,182	159,091	10·90
58	13,771	791	5·74	13,375	144,909	10·52
59	12,980	765	5·89	12,598	131,534	10·13
60	12,215	740	6·06	11,845	118,936	9·74
61	11,475	717	6·25	11,118	107,091	9·33
62	10,762	694	6·49	10,415	95,973	8·92
63	10,068	672	6·68	9,732	85,558	8·50
64	9,396	655	6·98	9,069	75,826	8·07
65	8,741	644	7·37	8,419	66,757	7·64
66	8,097	639	7·89	7,777	58,338	7·20
67	7,458	635	8·51	7,141	50,561	6·78
68	6,823	631	9·25	6,507	43,420	6·36
69	6,192	625	10·09	5,880	36,913	5·96
70	5,567	615	11·05	5,259	31,033	5·57
71	4,952	601	12·14	4,652	25,774	5·20
72	4,351	579	13·30	4,061	21,122	4·85
73	3,772	552	14·63	3,496	17,061	4·52
74	3,220	518	16·09	2,961	13,565	4·21
75	2,702	476	17·62	2,464	10,604	3·92
76	2,226	426	19·14	2,013	8,140	3·66
77	1,800	374	20·78	1,613	6,127	3·40
78	1,426	322	22·58	1,265	4,514	3·17
79	1,104	270	24·46	969	3,249	2·94
80	834	221	26·50	724	2,280	2·73
81	613	175	28·55	525	1,556	2·54
82	438	136	30·96	370	1,031	2·35
83	302	100	33·21	252	661	2·19
84	202	72	35·67	166	409	2·02
85	130	50	38·24	105	243	1·87
86	80	33	40·92	64	138	1·72
87	47	21	43·70	36	74	1·57
88	26	12	46·59	20	38	1·46
89	14	7	49·59	11	18	1·29
90	7	4	52·70	5	7	1·07
91	3	2	55·91	2		·82
92	1	1	59·13	..		

TABLE—T.

LIFE TABLE—N. W. F. P., SIND AND BALUCHISTAN.

Females.

Age.	Living at age x.	Dying between ages x and $x+1$.	Mortality per cent.	Living between ages x and $x+1$.	Living above age x.	Mean after life-time at age x.
(1)	(2)	(3)	(4)	(5)	(6)	(7)
0	100,000	25,663	25·66	84,891	2,328,185	23·28
1	74,337	6,469	8·70	70,808	2,243,294	30·18
2	67,868	3,558	5·24	66,429	2,172,486	32·01
3	64,310	2,086	3·24	63,217	2,106,057	32·75
4	62,224	1,514	2·43	61,467	2,042,840	32·83
5	60,710	999	1·65	60,211	1,981,373	32·64
6	59,711	878	1·47	59,272	1,921,162	32·17
7	58,833	810	1·38	58,428	1,861,890	31·65
8	58,023	760	1·31	57,643	1,803,462	31·08
9	57,263	723	1·26	56,901	1,745,819	30·49
10	56,540	700	1·24	56,190	1,688,918	29·87
11	55,840	690	1·24	55,495	1,632,728	29·24
12	55,150	705	1·28	54,798	1,577,233	28·60
13	54,445	730	1·34	54,080	1,522,435	27·96
14	53,715	760	1·42	53,335	1,468,355	27·34
15	52,955	790	1·50	52,560	1,415,020	26·72
16	52,165	818	1·57	51,756	1,362,460	26·12
17	51,347	846	1·65	50,924	1,310,704	25·53
18	50,501	871	1·72	50,065	1,259,780	24·95
19	49,630	894	1·80	49,183	1,209,715	24·37
20	48,736	916	1·88	48,278	1,160,532	23·81
21	47,820	926	1·96	47,352	1,112,254	23·26
22	46,884	955	2·04	46,407	1,064,902	22·71
23	45,929	974	2·12	45,442	1,018,495	22·18
24	44,955	992	2·21	44,459	973,053	21·65
25	43,963	1,010	2·30	43,458	928,594	21·12
26	42,953	1,029	2·40	42,438	885,136	20·61
27	41,924	1,049	2·50	41,400	842,698	20·10
28	40,875	1,074	2·63	40,338	801,298	19·60
29	39,801	1,109	2·77	39,246	760,960	19·12
30	38,692	1,161	3·00	38,112	721,714	18·65
31	37,531	1,215	3·24	36,923	683,602	18·21
32	36,316	1,250	3·44	35,691	646,679	17·81
33	35,066	1,263	3·60	34,435	610,988	17·42
34	33,803	1,267	3·75	33,169	576,553	17·06
35	32,536	1,263	3·88	31,905	543,384	16·70
36	31,273	1,257	4·02	30,644	511,479	16·36
37	30,016	1,249	4·16	29,392	480,835	16·02
38	28,767	1,238	4·30	28,148	451,443	15·69
39	27,529	1,225	4·45	26,916	423,295	15 38
40	26,304	1,207	4·59	25,701	396,379	15·07
41	25,097	1,185	4·72	24,504	370,678	14·77
42	23,912	1,160	4·85	23,332	346,174	14·48
43	22,752	1,133	4·98	22,186	322,842	14·19
44	21,619	1,103	5·10	21,067	300,656	13·91
45	20,516	1,071	5·22	19,986	279,589	13·63
46	19,455	1,038	5·34	18,931	259,603	13·34
47	18,407	1,004	5·45	17,905	240,672	13·08
48	17,403	968	5·56	16,919	222,767	12·80
49	16,435	930	5·66	15,970	205,848	12·52
50	15,505	890	5·74	15,060	189,878	12·25
51	14,615	851	5·82	14,189	174,818	11·96
52	13,764	813	5·91	13,358	160,629	11·67
53	12,951	776	5·99	12,563	147,271	11·37
54	12,175	741	6·09	11,804	134,708	11·06
55	11,434	708	6·19	11,080	122,904	10·75
56	10,726	677	6·31	10,388	111,824	10·43
57	10,049	647	6·44	9,725	101,436	10·09
58	9,402	619	6·58	9,093	91,711	9·75
59	8,783	593	6·75	8,486	82,618	9·41
60	8,190	569	6·95	7,906	74,132	9·05
61	7,621	547	7·18	7,347	66,226	8·69
62	7,074	524	7·41	6,812	58,879	8·32
63	6,550	503	7·68	6,299	52,067	7·95
64	6,047	484	8·00	5,805	45,768	7·57
65	5,563	466	8·38	5,330	39,963	7·18
66	5,097	449	8·81	4,872	34,633	6·79
67	4,648	435	9·36	4,431	29,761	6·40
68	4,213	421	9·99	4,002	25,330	6·01
69	3,792	408	10·76	3,588	21,328	5·62
70	3,384	395	11·67	3,187	17,740	5·24
71	2,989	381	12·75	2,798	14,553	4·87
72	2,608	364	13·96	2,426	11,755	4·51
73	2,244	345	15·37	2,072	9,329	4·16
74	1,899	323	17·01	1,737	7,257	3·82
75	1,576	297	18·85	1,428	5,520	3·50
76	1,279	267	20·88	1,145	4,092	3·20
77	1,012	236	23·32	894	2,947	2·91
78	776	201	25·59	676	2,053	2·65
79	575	166	28·87	492	1,377	2·39
80	409	131	32·03	343	885	2·16
81	278	99	35·61	229	542	1·95
82	179	71	39·66	143	313	1·75
83	108	47	43·52	85	170	1·57
84	61	29	47·54	46	85	1·39
85	32	17	53·13	24	39	1·22
86	15	9	60·34	10	15	1·00
87	6	4	70·12	4	5	·83
88	2	2	75·87	1	1	·50

TABLE—U.

LIFE TABLE—UNITED PROVINCES.

Males.

Age.	Living at age x.	Dying between ages x and $x+1$.	Mortality per cent.	Living between ages x and $x+1$.	Living above age x.	Mean after life-time at age x.
(1)	(2)	(3)	(4)	(5)	(6)	(7)
0	100,000	27,856	27·86	83,576	2,455,930	24·56
1	72,144	6,910	9·58	68,378	2,372,354	32·88
2	65,234	3,985	6.11	63,112	2,303,976	35·32
3	61,249	2,674	4·37	59.832	2,240,864	36·59
4	58,575	1,860	3·18	57,594	2,181,032	37·23
5	56,715	1,345	2·37	56,010	2,123,438	37·44
6	55,370	1,017	1·84	54,862	2,067 428	37·34
7	54,353	808	1·49	53,949	2,012,566	37·03
8	53,545	677	1·26	53 206	1,958,617	36·58
9	52,868	596	1·13	52,570	1,905,411	36·04
10	52,272	547	1·05	51,999	1,852,841	35·45
11	51,725	522	1·01	51,464	1,800,842	34·82
12	51,203	517	1·01	50,944	1,749,378	34·17
13	50,686	522	1·03	50,425	1,698,434	33·51
14	50,164	534	1·06	49,897	1,648,009	32·85
15	49,630	550	1·11	49,355	1,598,112	32·20
16	49,080	568	1·16	48,796	1,548,757	31·56
17	48,512	587	1·21	48,219	1,499,961	30·92
18	47,925	605	1·26	47,622	1,451,742	30·29
19	47,320	618	1·31	47,011	1,404,120	29·67
20	46,702	627	1·34	46,389	1,357,109	29·06
21	46,075	637	1·38	45,756	1,310,720	28·45
22	45,438	646	1·42	45,115	1,264,964	27·84
23	44,792	656	1·46	44,464	1,219,849	27·23
24	44,136	666	1·51	43,803	1,175,385	26·63
25	43,470	678	1·56	43,131	1,131,582	26·03
26	42,792	691	1·61	42,447	1,088,451	25·44
27	42,101	707	1·68	41,747	1,046,004	24·85
28	41,394	722	1·74	41,033	1,004,257	24·26
29	40,672	740	1·82	40.302	963,224	23·68
30	39,932	763	1·91	39,551	922,922	23·11
31	39,169	782	2·00	38,778	883,371	22·55
32	38,387	805	2·10	37,984	844,593	22·09
33	37,582	825	2·20	37,170	806,609	21·46
34	36,757	845	2·30	36,334	769,439	20·93
35	35,912	864	2·40	35,480	733,105	20·41
36	35,048	881	2·51	34,608	697,625	19·90
37	34,167	898	2·63	33,718	663,017	19·41
38	33,269	914	2·75	32,812	629,299	18·92
39	32,355	927	2·87	31,891	596,487	18·44
40	31,428	939	2·99	30,959	564,596	17·96
41	30,489	948	3·11	30,015	533,637	17·50
42	29,541	954	3·23	29,064	503,622	17·05
43	28,587	959	3·35	28,107	474,558	16·60
44	27,628	961	3·48	27,148	446,451	16·16
45	26,667	962	3·61	26,186	419,303	15·72
46	25,705	961	3·74	25,224	393,117	15·29
47	24,744	957	3·87	24,266	367,893	14 87
48	23,787	953	4·01	23,310	343,627	14·45
49	22,834	948	4·15	22,360	320,317	14·03
50	21,886	942	4·30	21,415	297,957	13·61
51	20,944	934	4·46	20,477	276,542	13·20
52	20,010	925	4·62	19,548	256,065	12·80
53	19,085	915	4·79	18,627	236,517	12·39
54	18,170	903	4·97	17,719	217,890	11·99
55	17,267	891	5·16	16,821	200,171	11·59
56	16,376	879	5·37	15,937	183,350	11·20
57	15,497	864	5·58	15.065	167,413	10·80
58	14,633	849	5·80	14,208	152,348	10·41
59	13,784	835	6·06	13,367	138,140	10·02
60	12,949	820	6·34	12,539	124,773	9·64
61	12,129	804	6·63	11,727	112,234	9·25
62	11,325	786	6·94	10,932	100,507	8·87
63	10,539	767	7·28	10,155	89,575	8·50
64	9,772	747	7·65	9,399	79,420	8·13
65	9,025	727	8·05	8,661	70,021	7·76
66	8,298	705	8·50	7,946	61,360	7·39
67	7,593	681	8·97	7,252	53,414	7·03
68	6,912	657	9·51	6,584	46,162	6·68
69	6,255	633	10·12	5,938	39,578	6·33
70	5,622	606	10·77	5,319	33,640	5·98
71	5,016	577	11·51	4,728	28,321	5·65
72	4,439	547	12·33	4,165	23,593	5·31
73	3,892	516	13·25	3,634	19,428	4·99
74	3,376	482	14·27	3,135	15,794	4·68
75	2,894	445	15·37	2,672	12,659	4·37
76	2,449	407	16·61	2,245	9,987	4·08
77	2,042	367	18·00	1,859	7,742	3·79
78	1,675	327	19·55	1,511	5,883	3·51
79	1,348	287	21·26	1,205	4,372	3·24
80	1,061	246	23·18	938	3,167	2·98
81	815	207	25·36	711	2,229	2·73
82	608	169	27·84	524	1,518	2·50
83	439	134	30·48	372	994	2·26
84	305	102	33·58	254	622	2·04
85	203	76	37·30	165	368	1·81
86	127	53	41·80	100	203	1·60
87	74	35	47·23	57	103	1·39
88	39	21	53·59	28	46	1·18
89	18	11	60·88	12	18	1·00
90	7	5	69·10	4	5	·71
91	2	2	78·25	1	1	·50

TABLE—V.

LIFE TABLE—UNITED PROVINCES.

Females.

Age.	Living at age x.	Dying between ages x and $x+1$.	Mortality per cent.	Living between ages x and $x+1$.	Living above age x.	Mean after life-time at age x.
(1)	(2)	(3)	(4)	(5)	(6)	(7)
0	100,000	25,389	25·39	85,113	2,509,376	25·09
1	74,611	6,855	9·19	70,864	2,424,263	32·49
2	67,756	3,864	5·70	65,694	2,353,399	34·73
3	63,892	2,560	4·01	62,533	2,287,705	35·81
4	61,332	1,764	2·88	60,401	2,225,172	36·28
5	59,568	1,272	2·14	58,902	2,164,771	36·34
6	58,296	967	1·66	57,813	2,105,869	36·12
7	57,329	773	1·35	56,942	2,048,056	35·72
8	56,556	652	1·15	56,230	1,991,114	35·21
9	55,904	582	1·04	55,613	1,934,884	34·61
10	55,322	544	·98	55,050	1,879,271	33·97
11	54,778	533	·97	54,512	1,824,221	33·30
12	54,245	543	1·00	53,973	1,769,709	32·62
13	53,702	568	1·06	53,418	1,715,736	31·95
14	53,134	604	1·14	52,832	1,662,318	31·29
15	52,530	647	1·23	52,207	1,609,486	30·64
16	51,883	693	1·33	51,536	1,557,279	30·02
17	51,190	740	1·45	50,820	1,505,743	29·41
18	50,450	782	1·55	50,059	1,454,923	28·84
19	49,668	823	1·66	49,257	1,404,864	28·29
20	48,845	861	1·76	48,414	1,355,607	27·75
21	47,984	891	1·85	47,539	1,307,193	27·24
22	47,093	916	1·95	46,635	1,259,654	26·75
23	46,177	939	2·03	45,707	1,213,019	26·27
24	45,238	959	2·12	44,758	1,167,312	25·80
25	44,279	975	2·20	43,792	1,122,554	25·35
26	43,304	987	2·28	42,811	1,078,762	24·91
27	42,317	996	2·35	41,819	1,035,951	24·48
28	41,321	1,002	2·43	40,820	994,132	24·06
29	40,319	1,005	2·49	39,816	953,312	23·64
30	39,314	1,005	2·56	38,812	913,496	23·24
31	38,309	1,004	2·62	37,807	874,684	22·83
32	37,305	1,000	2·68	36,805	836,877	22·43
33	36,305	995	2·74	35,808	800,072	22·04
34	35,310	989	2·80	34,816	764,264	21·64
35	34,321	982	2·86	33,830	729,448	21·25
36	33,339	974	2·92	32,852	695,618	20·86
37	32,365	966	2·98	31,882	662,766	20·48
38	31,399	956	3·05	30,921	630,884	20·09
39	30,443	946	3·11	29,970	599,963	19·71
40	29,497	935	3·17	29,030	569,993	19·32
41	28,562	922	3·23	28,101	541,096	18·94
42	27,640	908	3·28	27,186	512,862	18·56
43	26,732	894	3·34	26,285	485,676	18·17
44	25,838	878	3·40	25,399	459,391	17·78
45	24,960	862	3·45	24,529	433,992	17·39
46	24,098	846	3·51	23,675	409,463	16·99
47	23,252	831	3·57	22,837	385,788	16·59
48	22,421	816	3·64	22,013	362,951	16·19
49	21,605	801	3·71	21,205	340,938	15·78
50	20,804	786	3·78	20,411	319,733	15·37
51	20,018	768	3·84	19,634	299,322	14·95
52	19,250	754	3·93	18,873	279,688	14·53
53	18,496	742	4·01	18,125	260,815	14·10
54	17,754	730	4·11	17,389	242,690	13·67
55	17,024	717	4·21	16,666	225,301	13·23
56	16,307	705	4·31	15,955	208,635	12·79
57	15,602	694	4·45	15,255	192,680	12·35
58	14,908	686	4·60	14,565	177,425	11·90
59	14,222	678	4·77	13,883	162,860	11·45
60	13,544	672	4·96	13,208	148,977	11·00
61	12,872	667	5·18	12,538	135,769	10·55
62	12,205	661	5·42	11,875	123,231	10·10
63	11,544	656	5·68	11,216	111,356	9·65
64	10,888	651	5·98	10,563	100,140	9·20
65	10,237	646	6·31	9,914	89,577	8·75
66	9,591	642	6·69	9,270	79,663	8·31
67	8,949	635	7·10	8,632	70,393	7·87
68	8,314	629	7·56	8,000	61,761	7·43
69	7,685	623	8·11	7,373	53,761	7·00
70	7,062	618	8·75	6,753	46,388	6·57
71	6,444	614	9·53	6,137	39,635	6·15
72	5,830	608	10·43	5,526	33,498	5·75
73	5,222	599	11·46	4,923	27,972	5·36
74	4,623	583	12·61	4,331	23,049	4·99
75	4,040	562	13·90	3,759	18,718	4·63
76	3,478	533	15·31	3,212	14,959	4·30
77	2,945	496	16·85	2,697	11,747	3·99
78	2,449	454	18·52	2,222	9,050	3·70
79	1,995	405	20·32	1,793	6,828	3·42
80	1,590	354	22·24	1,413	5,035	3·17
81	1,236	300	24·29	1,086	3,622	2·93
82	936	248	26·47	812	2,536	2·71
83	688	198	28·78	589	1,724	2·51
84	490	153	31·21	413	1,135	2·32
85	337	114	33·77	280	722	2·14
86	223	81	36·46	193	442	1·98
87	142	56	39·28	114	259	1·82
88	86	36	42·22	68	145	1·69
89	50	23	45·30	39	77	1·54
90	27	13	48·50	20	38	1·41
91	14	7	51·83	11	18	1·29
92	7	4	55·28	5	7	1·00
93	3	2	58·86	2	2	·66
94	1	1	62·58	..	..	..

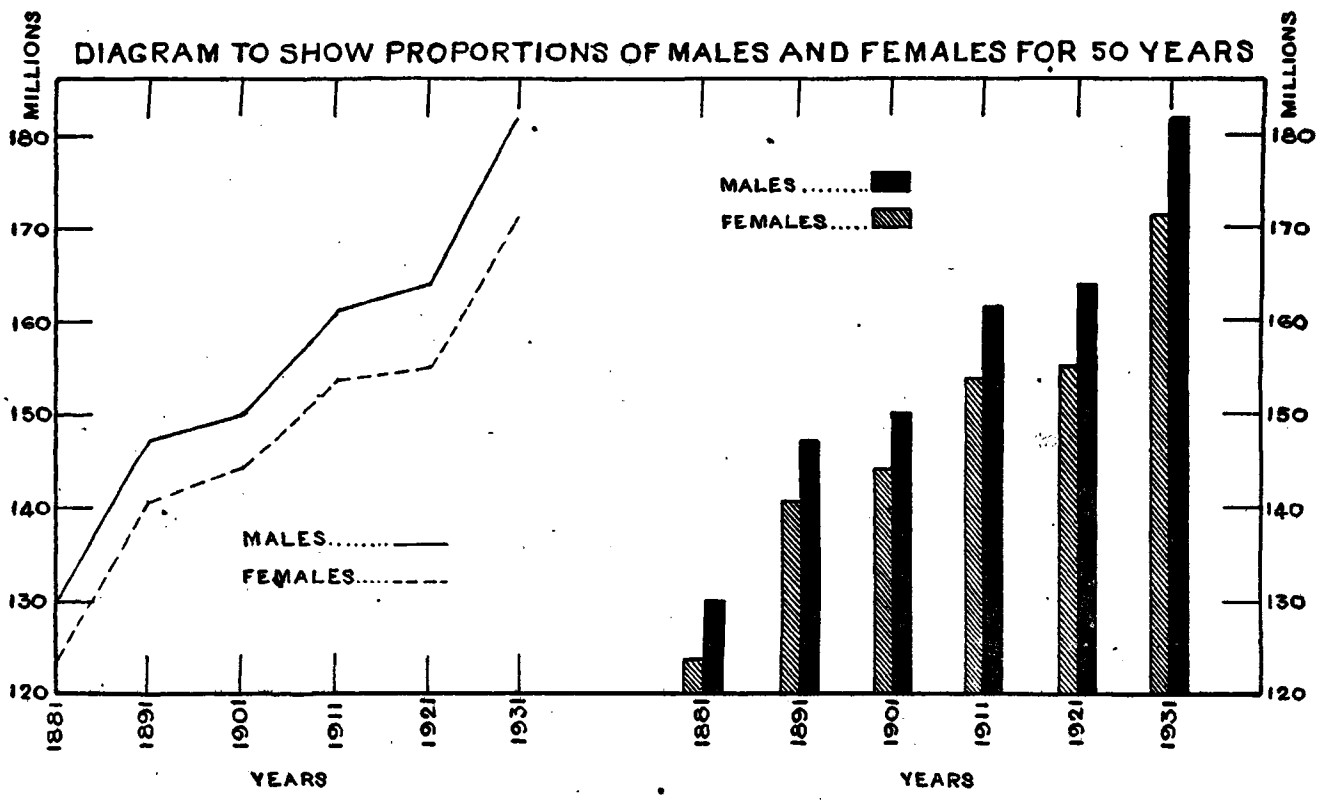
CHAPTER V.

Sex.

Section i.—Interpretation of the Returns.

78. The figures of the population of India by sexes show a further continuation of the steady fall in the proportion of females to males that has been going on since 1901. Various reasons have frequently been repeated to explain this shortage of females which is so characteristic of the population of India as compared to

Sex Ratio.



that of most European countries. The female infant is definitely better equipped by nature for survival than the male, but in India the advantage she has at birth is probably neutralised in infancy by comparative neglect and in adolescence by the strain of bearing children too early and too often. Sons are everywhere desired not only among Hindus, where a son is necessary to his father's salvation, but almost equally so among other communities as well; daughters in many parts of India mean great pecuniary expense in providing for their marriage, which moreover, among the majority perhaps of Hindus, must be arranged by the time they reach puberty. So strong indeed is the prejudice against the birth of daughters that abortion is reported to be sometimes practised if the child in the womb is foretold to be a girl. In every province in India the available vital statistics indicate that fewer females are born than males. It is admitted that the vital statistics are incomplete and that there is a definite tendency to omit to report the birth of females in a greater degree than that of the similar omission with regard to males; at the same time the inequality which can be attributed to this source is not enough to balance the excess of male births reported; nor is there any evidence to justify an assumption of widespread female infanticide, though that practice no doubt lingers in isolated or remote areas, since as lately as 1930 the Jammu and Kashmir State Government had to take special measures to suppress it in certain Rajput villages, while the extraordinarily low female ratio of the Shekhawat branch of the Kachwaha clan of Rajputs in Jaipur State, 530 females per 1,000 males, is indubitably suggestive of deliberate interference with the natural ratio, when considered with the Rajput tradition. The next worst Rajput ratios are those of the Bhadauria and Tonwar Rajputs in Gwalior State which are 634 and 622 females per 1,000 males respectively and these are also so low as to appear extremely

suspicious of the same thing, being very much lower than the ratio (754) for the Hindu Rajputs of Jammu and Kashmir. Comparative neglect of female children is however admittedly common and taking the population as a whole the superior vitality of the female is unable to become operative at all until she reaches the age of 20 years. Further, among Hindus and Jains the effect of the consequent limitation in the number of females as compared to males is accentuated by a ban on widow re-marriage.

In regard to the female ratio of the Kachwaha Rajputs, it is necessary to quote the Census Superintendent of Rajputana :—

"In considering these figures one is at once struck by the very low female ratio (584 females per 1,000 males) among Kachwahas. It is this that brings the ratio for all Rajputs as low as 796. If they are excluded the ratio is 841 which approximates to those for the closely akin Indo-Aryan races such as Jats, Gujars and Ahirs. The reason for the paucity of females must therefore be sought for among conditions that are peculiar to the Kachwahas. This large, important and numerous clan acknowledges as its head the Ruler of Jaipur, a State the geographical position of which renders the Rajput matrimonial adage of "*Pachcham ka beta aur Purab ki beti*" difficult of fulfilment. A bridegroom from the West can only suitably be sought from the Rathor of Bikaner and Marwar among whom the laws of hypergamy and the advantages of propinquity render easy the obtaining of brides from the Parihars, Sesodias and Bhattis. The most numerous by far of the Kachwaha clan are the Shekhawats, inhabitants of the Northern and, by Nature most ill-favoured portion of the State. Poverty precludes the payment of the substantial wedding dowry that is usually demanded and the family is traditionally haunted by the prospect of unmarried girls. There has thus grown up such a studied neglect of female infant life, both actual and potential, as results in a recorded ratio of 530 female Shekhawats for every 1,000 males.....Deliberate infanticide seldom comes to light but there is no doubt that unwanted female infants are often so neglected, especially in some clans of Rajputs, that death is the result. In Jaipur State, for 1,000 little Rajput boys aged from 0-6 there are only 659 little girls, while similar figures for Marwar and Mewar are 856 and 982 respectively. The diagram for the whole population shows that in childhood boys thrive at the expense of girls and the sudden drop in the proportion of females after the age of 4 bears testimony to this".

It is probably significant that the ratio of females to males in Rajputana is higher in towns than in rural areas. This is in contrast to the greater part of India, and is suggestive of a conservative disregard of girl babies in the remoter areas. It may here be pointed out that if infanticide were, as might be expected, most frequent in families in which daughters were most numerous and absent where many sons and few daughters were born, the ultimate effect would be to perpetuate strains in which males predominated at the expense of those favouring female births, a point of some importance in connection with the considerations in the following paragraph.

Masculinity and Decline.

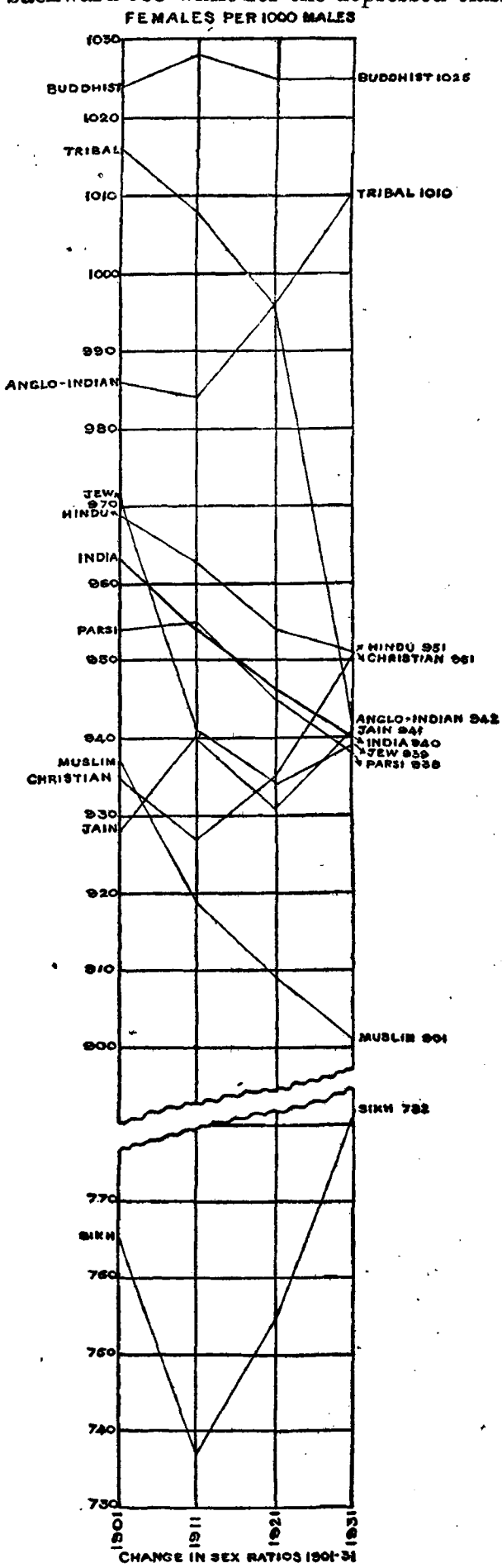
79. A good deal of recent work on sex ratios has tended to the view that an increase in masculinity is an indication of declining population. Clearly that is not the case in India as a whole. On the other hand it may have some correlation to the low rate of increase among Hindus and Jains as compared to that in other religious bodies, as it is among Hindus and Jains that the disharmony resulting from the low proportion of women is likely to be most acutely felt on account of the non-remarriage of widows. It is not unlikely moreover that the caste system itself definitely tends towards a preponderance of masculinity. Westermarck takes the view that a mixture of race leads to an increase in the proportion of females and he cites (*History of Human Marriage*, pages 476 to 482, 3rd edn.) a number of observations from various parts of the world to support this view, and quotes incidentally Dr. Nagel's experiments in the self-fertilization of plants as producing an excess of male flowers, several cases of inbreeding herds of cattle in which bull calves greatly exceed heifers, and two independent experiments in horse-breeding indicating that fillies predominate among foals in proportion as the sire and dam differ in colour. Heape, arguing from the breeding of dogs, likewise concludes that inbreeding increases masculinity (quoted by Pitt-Rivers, *Clash of Culture*). The obvious inference is that marriage within the caste will ultimately, at any rate, increase the proportion of male to female children, and it is worth noticing that the belief that endogamy has this result does not merely arise from modern enquiries into the subject, since the Talmud is quoted as stating that mixed marriages produce only girls. It cannot, however, be taken as definitely proved that femininity increases with hybridization, as some investigations point in the opposite direction, and it may be noted in passing that among the Andamanese, who are

certainly declining faster than any race in India, women exceed men among the pure-bred aborigines, whereas males exceed females among the half-breeds. The same is the case with the Cochin Jews, where the White Jews, who are strictly endogamous and pure bred and who seem to be approaching extinction, number more females than males, whereas the hybridized Black Jews, who show some increase since 1921, have more males than females. The population concerned is, however, so small in the cases of the Andamanese and the White Jews that it is not safe to draw any conclusion, but Anglo-Indian males exceed Anglo-Indian females, whose ratio per 1,000 males is 942, and the disproportion is maintained throughout the reproductive period. Pitt-Rivers, while admitting that miscegenation has lowered the excessive masculinity of the pure Maori, attributes this to the greater adaptability of the mixed stock to vitally changed conditions and not to the effect of an admixture of blood directly, and, if he is right in this, it is possible that the failure of hybridization to increase the sex ratio in the case of Anglo-Indians is symptomatic of a decreased adaptability to an unchanged environment, but on the other hand the Anglo-Indian is anything but decreasing in numbers, his increase during the past decade has been 22·4% and during the past 50 years 122·9%. The apparent connection therefore between inbreeding and masculinity may be due to some other factor hitherto not appreciated. At the same time the fact remains that there is a good deal of evidence to support the theory that inbred or pure-blooded societies produce an excess of males, and Miss King's experiments with rats (quoted by Pitt-Rivers, *op. cit.*) afforded evidence that the normal sex ratio could be changed by breeding from litters which contained an excess of males. Mr. Sedgwick, in the Bombay Census Report for 1921, pointed out that the Indian caste system with its exogamous *gotra* and endogamous caste "is a perfect method of preserving what is called in Genetics the 'pure line'. The endogamy prevents external hybridisation, while the (internal) exogamy prevents the possibility of a fresh pure line arising within the old one by the isolation of any character not common to the whole line. With the preservation of the pure line the perpetuation of all characters common to it necessarily follows." Whether this proposition be entirely acceptable or not, it may be conceded that if once a caste, whether as a result of inbreeding or of some totally different factor, has acquired the natural condition of having an excess of males, this condition is likely to be perpetuated as long as inbreeding is maintained. Caste therefore would appear to be of definite assistance to the Hindu in his superlative anxiety for male children; moreover, since the higher the caste the stricter, in the past at any rate, the ban on external exogamy, this tendency would show more patently in the higher caste and explain why the proportion of females to males increases in inverse ratio to social status. In any case it would be interesting to have reliable statistics of the sexes of the offspring of intercaste marriages.

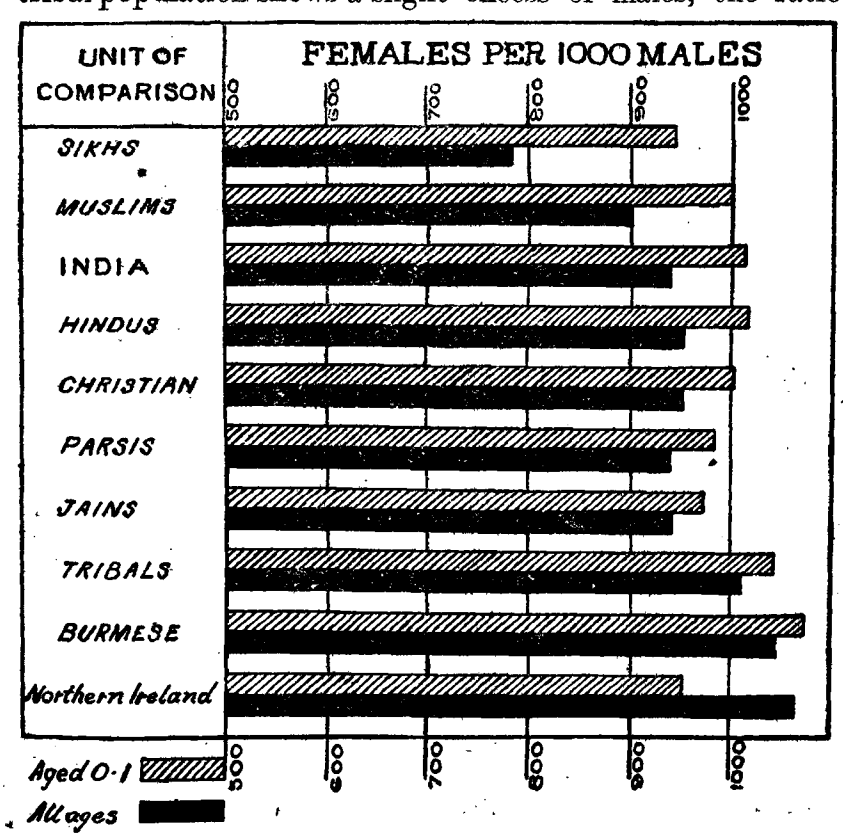
Sex Ratio and community.

80. *It* is not, however, only Hindu society which suffers in India from a shortage of females, though in the case of Muslims, as also of Christians and of the Black Jews above referred to, the original stock from which the community has been recruited must have been very largely Hindu originally and may therefore be still influenced by the proclivities encouraged by previous inbreeding. Local conditions may also have some bearing on the case, as the proportion of females to males is much higher in the damp climate of the south and east than in the drier Deccan and north-west, though here again it is not safe to infer, as was inferred in 1921 by Marten, that climate is responsible for the ratio, since in that case the ratio of females to males should be still higher in the Nicobars than in Madras. In the Nicobars, however, the indigenous ratio is 927 females to every 1,000 males, while in the Andamans, where the basis of the local-born population is drawn from all over India and Burma and where the climate approximates to that of Madras and Burma, the ratio is far less, 356 female births being recorded for every 1,000 males among non-Andamanese. The Andamans figures rather suggest that race is more likely to be the responsible factor than climate. One other factor has to be mentioned and that is the great reduction of recent years in mortality from famine. The India Census Report of 1911 (pages 220—222) adduces some evidence to suggest that famine leads to a higher mortality among males, and may therefore function as a corrective to an excessive male ratio, so that a reduction of mortality from famine would automatically reduce the ratio of females to males.

It is generally recognised that the ratio of females to males increases inversely with social standing among Hindus. This is well illustrated by the figures for Bombay where the whole Hindu population has been divided up according to education and social status into advanced, intermediate, backward and depressed classes. For the advanced castes the ratio of women to men is 878 per 1,000, for the intermediate castes it is 935 per 1,000, for the aboriginal tribes 956 and for other backward 953 while for the depressed classes it rises to 982 per 1,000 males. On the other hand the ratio for Muslims taken as a whole in the same province is only 809 females to per 1,000 males, and even if the States of Western India, where Muslim females actually exceed males in number, be reckoned in with Bombay it only raises the ratio for Muslim women to 829 per 1,000 males. These figures are possibly not quite representative as they stand, since many of the Muslims in Bombay are immigrants, while climatic or racial factors may enter in since Sind is preponderatingly Muslim as compared to the rest of the Bombay Presidency, and as has already been stated, the preponderance of males is greater in the dry areas in the north-west of India, whatever the reason may be. The figures are, however, generally indicative of the fact that the preponderance of males over females is certainly no less among Muslims generally than among Hindus. It is probable that some proportion of the excess number of males both among Muslims and Brahmans or other high class Hindus is to be accounted for by the *purdah* system, not so much because there is any deliberate concealment of females, as because it makes the household generally more difficult of access to the enumerator, who might be tempted to put down the names of the members of the household personally known to him and to omit those unknown, among whom the women of the household would naturally preponderate, to avoid having to make himself a nuisance to the inmates. There is, however, no reason to believe that the short enumeration of women due to this cause accounts for more than a very small part of the excess of males disclosed by the census. The Census Superintendent for Bombay has argued with some plausibility for the view that in the north-west of India, particularly among Muslims, the census returns have consistently understated the number of females between 0 and 15



on account of indifference to their existence or of deliberate concealment; his arguments are attractive, but fail to account for the fact that the ratio of females aged 0-1 is much higher than the total ratio, whereas it is just at that period that it might be expected to be least, not only on account of the greater number of males born but because concealment would presumably be just as active a factor at that age as during the next 10 years or so while indifference might be expected to be possibly even more active, nor does it account for the existence of a progressive decline in the ratio from census to census. The all-India ratio (Burma included) is 901 females per 1,000 males for Muslims and 951 females per 1,000 males for Hindus. Here again, however, it has to be remembered that Muslims predominate in the north-west where the ratio of females to males is lower in all communities than in the south and east. If the Punjab alone be taken the Muslims have the higher ratio 841 females per 1,000 males, Hindus having 826 and Sikhs only 799 females per 1,000 males. The only provinces in which there is actually an excess of women over men are Madras and Bihar and Orissa, though the Central Provinces can be added if Berar be excluded. In the Central Provinces and Berar taken together males have exceeded females for the first time since 1891, though in the natural population alone females still exceed males. In Burma again if Burmese alone be taken there is an excess of women over men, and the excess of males, as in the Federated Malay States, is due entirely to the immigration of foreign males. Conversely the excess of females in Bihar and Orissa, in the Central Provinces, other than Berar, and in Madras is partly accounted for by the emigration of males. The excess in Bihar and Orissa is mainly in Chota Nagpur and Orissa, including the States. If the natural as distinct from the actual populations of these provinces be taken, there is a ratio of 1,004 females per 1,000 males in the Central Provinces, 984 females per 1,000 males in Bihar and Orissa and 1,010 females per 1,000 males in Madras. Where females are in excess the excess is still most marked in the lower castes and does not always extend to the higher. Thus in Bihar and Orissa there are 964 Brahman females to every 1,000 Brahman males, but in the Hari caste there are 1,009 females to every 1,000 males. Similarly in the Central Provinces there are 863 Brahman females to 1,000 males, but 965 Sonar, 1,017 Kalar and 1,117 Ghasia females to 1,000 males of their respective castes. The aboriginal tribes which have retained their tribal religions show for India as a whole, an excess of females per 1,000, males, their ratio being 1,009. For British Territory there is a decidedly higher ratio of 1,018 females to every 1,000 males, which is mainly due to the high ratio of females (1,025 per 1,000 males) among the non-Hinduised tribes of Chota Nagpur and the Santal Parganas, since elsewhere except in Burma (1,021) and in Madras (1,006 females per 1,000 males) the tribal population shows a slight excess of males, the ratio being on the average 994 females per 1,000 males. It seems likely that this high ratio of females among the aborigines of Chota Nagpur and of the Agency Tracts of Madras is partly due to the recruiting of males for labour on the Assam tea gardens and the figures for emigration to Assam confirm the supposition, as the Census Superintendent for that province remarks on the very poor recruitment of women coolies during the decade. The ratio is higher in the Bihar and Orissa States (1,038) and in Chota Nagpur



(1,040) than in the Santal Parganas though for Indian States generally there are only 993 tribal females per 1,000 males. Generally speaking however, except in the Nicobars the numbers of the sexes are fairly well balanced in non-Hinduised tribes, being much more nearly equal than in either Hindus or Muslims in India as a whole. The general conclusion as to the sex ratios of the population as a whole of India proper is therefore that in the aboriginal tribes the numbers of the two sexes are approximately equal, whereas in the rest of the community males exceed females. The all-India ratio of the latter per 1,000 of the former is lowest among Sikhs (782 for India as a whole), next lowest among Muslims (901), and is 951 among Hindus; but this higher ratio is only maintained as compared to Muslims if the whole population be taken together, since the bulk of the Muslim population is located in the area where the females ratio for the whole community is lowest. Taken by separate areas the ratio of females to males among Muslims is equal to or higher than the ratio among Hindus; thus in Madras there are approximately 1,026 females per 1,000 males in both communities and in the Punjab the Muslim ratio of females per 1,000 males is, as we have seen already, higher than the Hindu ratio. Within the Hindu community the ratio increases in inverse proportion to social position and education. The table in the margin and diagram above show the female ratio in the first year of life as compared to that at all ages censused, indicating the comparative wastage of female life from whatever causes.

Females per 1,000 males. (of population returned by age.) In	Aged 0-1.	All ages.	Variation % between columns 2 and 3.
Sikhs	947	784	—17·2
Muslims	999	904	—9·5
India	*1,013*	*941*	*—7·1*
Hindus ..	1,017	953	—6·3
Christians ..	1,002	952	—5·0
Parsis	981	940	—4·2
Jains	972	941	—3·2
Tribals	1,045	1,009	—3·4
Burmese ..	1,076	1,046	—2·8
Northern Ireland ..	*951*	*1,066*	*+12·0*

Reproductive period.

81. From the point of view, however, of the immediate increase or decrease of population the sex ratio of the total community is of less importance than the sex ratio of the breeding part of it, since on account of age or immaturity a considerable proportion of the population is neutral as regards reproduction. If we examine the relative proportions of females aged 15 to 45 and of males aged 20 to 50, which may be taken to represent roughly the breeding age period of the population of India, it becomes immediately apparent that the proportion of female to male is generally higher than it is when the ratio is based on the total population. The marginal figures show the provincial ratios in British India, calculated first on the reproductive ages, compared with those calculated on the total population, and arranged according to the number of females per 1,000 males in ascending order. The figures of Northern Ireland (1926) have been added for comparison. As in India there are areas, or at least one, Co. Fermanagh, where males exceed females, and have done so for fifty years. Delhi and the Andaman Islands have been purposely omitted on account of the artificial composition of their populations. Apart from Coorg, where as already pointed out the low female ratio seems quite out of place and which calls for some special explanation not yet forthcoming, the position of three provinces excites comment. Assam might be expected to figure lower down in the list, the Nicobars lower still, and the Central Provinces on the contrary higher up. The probability is that Assam and the Central Provinces are inversely affected by migration, that is, by able-bodied males of the reproductive ages immigrating to the first as tea garden labour and emigrating from the other in the same capacity. The figures of the Nicobars, with their very small population, have been to some extent biassed by the presence of

Serial No.	Province.	Females per 1,000 males reproductive age periods.	Females per 1,000 males total population.	Serial number according to column 4.	Difference per 1,000 males between columns 3 and 4.
1	2	3	4	5	6
1	Coorg	805	803	1	2
2	Punjab ..	918	831	2	+87
3	N. W. F. P. ..	961	843	3	+118
4	Bombay	970	901	7	+69
5	Ajmer-Merwara ..	976	892	5	+84
6	Nicobar Islands ..	991	881	4	+110
7	Assam ..	991	900	6	+91
8	United Provinces ..	995	902	8	+93
9	Bengal	1,037	924	9	+113
10	Burma	1,039	958	10	+81
11	Central Provinces	1,106	998	11	+108
12	Bihar and Orissa	1,130	1,005	12	+125
13	Madras ..	1,177	1,025	13	+152
	Northern Ireland ..	*1,231*	*1,066*	..	*+165*

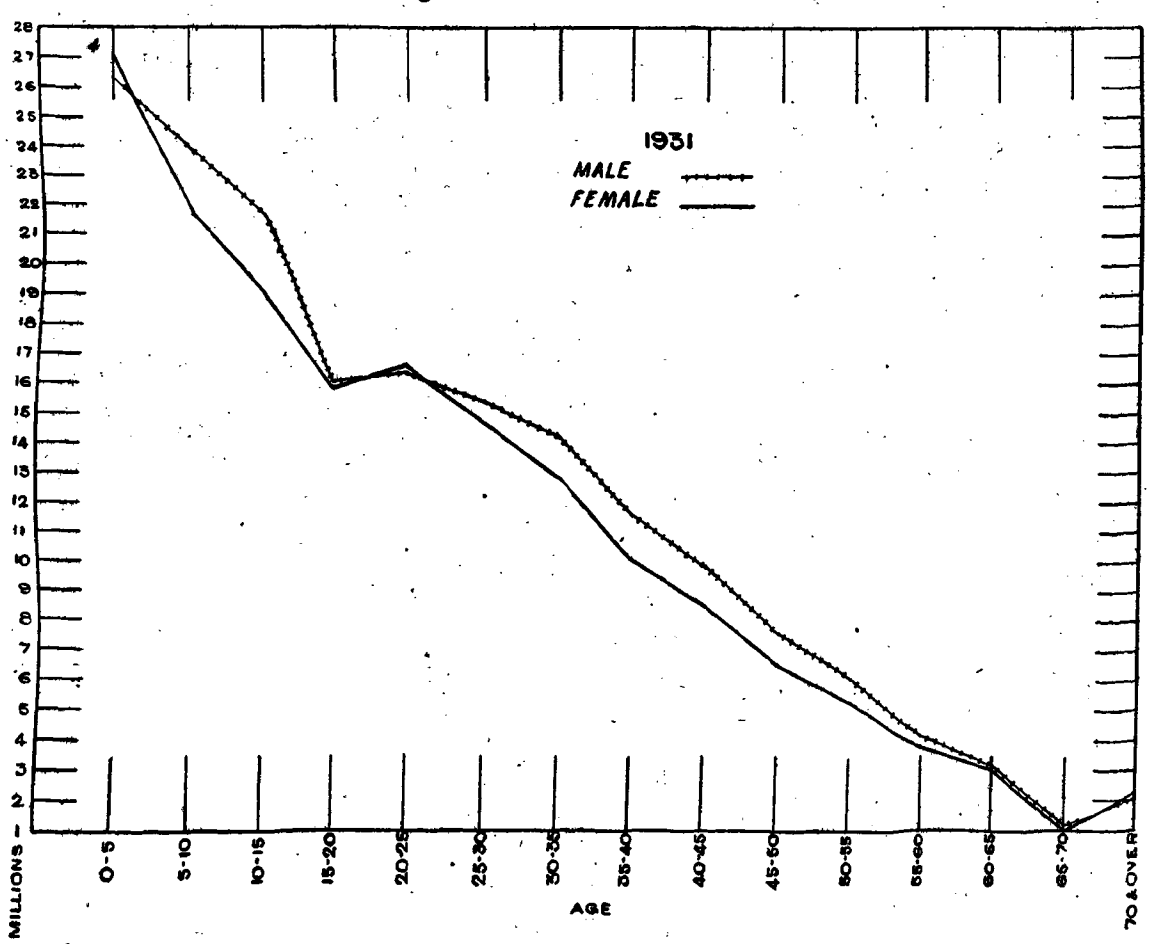
foreign traders and the crews of Chinese pearling boats, etc., whose comparatively small numbers are nevertheless enough to impair the balance of the sex returns. If these be excluded the number of Nicobarese females per 1,000 Nicobarese males is 927; and if the reproductive ages only be considered, it becomes 991. Taking India as a whole therefore, the sex ratio is very far from being as unfavourable to a progressive population as the total sex figures suggest at first sight. At the same time it must not be forgotten that the point at which the number of females is adequate to the number of males is limited to the ages from 15 to 30, and the probability is that their deficiency from the ages of 30 to 60 is due to exhaustion by breeding as soon as the reproductive period is reached. The Age of Consent Committee reports as follows :—

"Inquiries into a large number of cases show that when the marriage of young people is consummated at an early age, say, when the boy is not more than 16 years or the girl is 12 or 13, a fairly large percentage of wives die of phthisis or some other disease of the respiratory organs or from some ovarian complication within 10 years of the consummation of marriage".

The earlier deficiency is also responsible, since were the excess of females in age group 0-5 maintained till group 15 to 20 the parity between the sexes would be maintained for a greater period after that point. Actually more males are born but there are more females in age group 0-5, after which the sudden drop in the ratio may be taken to indicate the effect of discriminative neglect in favour of male children during the earlier years. The Census Superintendent for Bombay comes, among others, to the following definite conclusion :—

"The death-rate amongst females is higher than amongst males in the 5 to 10 years age group; this is due to the neglect of female children. There is no reliable evidence showing whether the tendency to neglect female children is more powerful in certain communities and castes than in others, but *prima facie* it is probable that neglect of female children varies to some extent with economic circumstances. A study of the specific death-rates shows that after the age of 5 only in the 40 and over age groups is the female death-rate lower than the male. 65·8 per cent. of the female population is aged between 5 and 40 so that the heavy death-rate affects the larger proportion of the female population."

There are more females again at 20 to 25 and for the third time more females at



Curves to show numbers living in India at different age-periods.

70 and over. The dip in the age curve for 1931 between 15 and 25 years indicates a recurrent feature of Indian age-returns, already referred to in the last chapter.

Writing with reference to the curves of male and female vital statistics in the United Provinces the Census Superintendent shows very lucidly the effects there of immature maternity on the ratio of the sexes :—

Age.	Number of female deaths per 1,000 male deaths, in the United Provinces of Agra and Oudh.	
	1931.	1921.
0-1	838	877
1-5	916	981
5-10	871	910
10-15	847	865
15-20	*1,000*	*981*
20-30	*1,070*	*1,044*
30-40	912	935
40-50	758	816
50-60	784	834
60 and over ..	877	936

"Nothing could demonstrate more plainly the dangers to which the women of this province are exposed owing to the conditions under which they bear children; and the fact that the curve rises between 20 and 30 illustrates the fact that those dangers are not limited to the birth of the first-born, but continue as the result of subsequently bearing too many and too frequent children, or as the result of disorders and diseases arising from child-birth.

In the margin I give the sex-ratio at the various age periods for 1921 and 1931. They are most striking. Here we see at once that whereas the sex-ratio in deaths has fallen since 1921 at all other ages, it has risen at the reproductive ages of 15-30. This bears out what I have said elsewhere, *viz* :—that in the absence of selective epidemic diseases the effect of the usual very high mortality of females at the reproductive ages becomes more noticeable, and so the sex-ratio in deaths rises."

In Cochin State on the other hand these conditions have been remedied :—

"Further a steady rise in the age of marriage consequent on the rapid progress of female education in the State and the gradual displacement of primitive methods of midwifery by modern and scientific methods have considerably reduced the dangers which almost all women have to face, and lowered the death-rate among young mothers to an appreciable extent. The gradual rise in the sex ratio is but the natural outcome of these improved conditions."

It is necessary now to examine the figures by certain religions in the same manner. Communities in which the women outnumber the men, figures of which present no abnormal features, need not perhaps occupy our attention further. Thus indigenous Burmese races show no marriages under 5 years and very few indeed under 10 years, and their total figures of married persons show a slight excess of females which is in no way remarkable. Indian figures are of course very different. In India as a whole in all except tribal communities the males outnumber the females, in spite of which we find a progressive instead of a regressive population, and at the same time the contradictory condition in many places that parents of sons are able to demand considerable sums from parents anxious to obtain husbands for daughters. The latter custom is of course partly due to the rule that a girl must be married before puberty, a point to which reference must be made in the next chapter, while the progressive nature of the population has already been indicated when pointing out that the inequality between the sexes was less at the reproductive ages than when taken as a whole. It is from this point of view that communities must be examined individually. Taking the Hindus it appears that there are 54,473,448 females of the reproductive ages to 51,450,266 males, an excess of three million or 1,059 females to every 1,000 males. In the case of the Hindus however the factor of the ban on widow remarriage is important, for there are 8,313,773 widows at the reproductive ages and when these are excluded the female excess is reduced to a deficiency of over five million, of over 10 per cent. that is, leaving only 897 per 1,000 males. Similarly among Jains the exclusion of widows leaves a deficiency of nearly 20 per cent. of females in the reproductive period. Sikhs have an actual deficiency of over 15 per cent. of females at the reproductive period in any case, and though a considerable number of their potentially reproductive males remain unmarried in consequence, they are, compared to Hindus and Jains, a late marrying community, while the remarriage of widows is not banned. In the case of the Muslims there is an excess of females (1,026 per 1,000 males) at the reproductive period, in spite of the fact that the female ratio for the whole population is only 901 per 1,000 males. The Christians have a still greater excess of females at the reproductive

Community.	Increase per cent. 1921—1931	Females 15—45 per 1,000 males 20—50.
Christian ..	32	1,080
Muslim ..	13	1,026
Hindu ..	10	897*
Jain	6	810*

* After exclusion of widows.

ages, having 1,080 females per 1,000 males of that period. It seems likely that these proportions have some definite bearing on the rates of increase in the different communities. It offers an explanation of the particularly small rate of increase of Jains, and a reason why Hindus have increased at a slower rate than Muslims. The comparative rate of Hindu increase would be lower still were it not for the large additions received from tribal communities, a source of recruitment which will not be available indefinitely. The exceptionally high Christian rate of increase is of course similarly affected by the inclusion of converts, but the sex ratio is probably contributive. In the case of the Sikhs, which is very obviously an instance to the contrary, it is impossible to ascertain what proportion of the abnormal increase is due to accretions from Hinduism. Considerable numbers of Hindus, particularly of the Arora caste, are reported to have turned Sikh in the Punjab, and there is some evidence of a considerable propaganda about the time of the census to induce depressed castes in the Punjab to return themselves as Sikhs. Sahejdhari Sikhs who returned themselves as Hindu in 1921 may have returned themselves as Sikh in 1931, and it is more than probable that this was the case in the Punjab, where they can register as voters in Sikh constituencies by making a declaration that they are Sikhs. In some provinces, *e.g.*, Sind, there have been extraordinary fluctuations in the numbers returned as Sikhs probably on account of a varying classification of Sahejdharis. The Sind variations are mentioned below (Chapter XI, para. 165) and must cause the exceptional increase of 1931 to be regarded with much reserve. The percentages of variation in Sind, where there were 127,000 Sikhs returned in 1881, were —99 in 1891 and —100 in 1901. In 1911, 12,000 were returned and the variations for 1921 and 1931 were —42 per cent. and +164 per cent. In any case it is likely that the practice of late marriage by the community in general would tend to a higher birth rate, or rather a higher survival rate, since it seems clear that premature maternity is likely not only to deplete the number of married women in the later age groups of the reproductive period but to reduce the number of healthy children born to them. If this be so the same consideration would apply to the analogous case of the Anglo-Indians already mentioned above. Another striking case which at first sight appears to conflict with the hypothesis proposed is that of the Tribal Religions which suffer a decrease of 15 per cent. in spite of the very favourable sex ratio of 1,143 females to 1,000 males in the reproductive period. It will be seen from the figures given in Chapter XI that this decrease can be entirely attributed to transfers from Tribal Religions to Hinduism and to Christianity, but chiefly to the former. In this connection a reference may be made to the diagram of the sex ratios at the last four censuses at paragraph 80 above. It will be noticed that the Christian and Sikh communities, which have both shown very remarkable increase in population at this census, have had a rising female ratio for the past two decades, and it is possible that the rising female ratio of the Anglo-Indians from 1911 to 1921 is also intimately associated with their 1931 increase, in which case the falling ratio of 1921-31 should indicate a much reduced rate of increase after 1941 if not before. No other community has shown any increase in the female ratio since 1911, except the slight increases during the past decade among Jains, Jews and Tribes. The steadily falling Muslim ratio is of some importance and must inevitably lead to the cessation of the high increase in that community. It is possibly to be imputed to the observance of the purdah system by the poorer classes and the consequent prevalence of consumption and early mortality among women. It also suggests a possible lowering of the age of marriage and maternity.

Community.	Variation per cent. 1921—1931.	Females 15—45 per 1,000 males 20—50.
Sikh	+34	848
Tribal	—15	1,143

Sex Ratio by Caste.

82. An examination of the sex ratio by caste might be expected to show an immediate correlation to the ratio of prevalence of infant marriage to which allusion is made in the next chapter, whereas at first sight these ratios appear in almost inverse relationship. It must however be borne in mind first that the ratio of the prevalence of infant marriage has been calculated on the number of married aged 0—6 only, excluding all figures of marriage for girls beyond that age group and secondly that the mere ceremony of marriage cannot of itself affect the ratio. The practices which govern the female ratio in India, apart from possible climatic or racial factors, the nature, degree and very existence of which are doubtful, are those relating to the care of female children and to too early and too frequent maternity,

neither of which have any necessary connection with the frequency of the marriage ceremony when the bride is under six and a half years old—an age at which even the most precocious can hardly bear children. The marginal table therefore must be regarded as merely suggestive of the possible prevalence of the neglect of female children and/or of too early and too frequent maternity as likely to be contributive to a low ratio of females to males in the total caste population. It may here be pointed out that the figures for Rajputs (India) include from some provinces both Sikh and Muslim Rajputs, and that in Jammu and Kashmir State, where it has recently (1930) been found necessary to take special measures to prevent infanticide among Hindu Rajputs, the sex ratio among Hindu Rajputs is 754 females per 1,000 males, that among Muslim Rajputs being 918. The Census Superintendent of the United Provinces points out that there still appears to exist a differential treatment of girl babies between different castes and continues :—

Caste or Tribe.	Females per 1,000 males.
Rajput (*Rajputana*)	798
Jat	805
Gujar	832
Brahman (*Bengal*)	847
Rajput (*India*)	868
Sayyid	884
Kayastha	888
Momin	898
Brahman (*India*)	902
Gadaria	929
Kunbi	937
Komati	938
Yadava	948
Dom	952
Chamar	967
Teli	979
Mahar	1,001
Maratha	1,004
Sawara	1,019
Gond	1,045
Nayar (*India*)	1,049
Tanti	1,058
Nayar (*Cochin*)	1,154

"It is only by preserving the girl babies that a sufficiency of females will remain at all ages. The dangers of child-birth (dependent in large measure on the customs of the caste in respect of the age of the consummation of marriage) largely control the ratio of the sexes in the total population of every caste."

A reference may be made in this connection to the marginal table and diagram above (paragraph 80) in which the difference between the female ratio in the first year of life and the female ratio for the population as a whole is clearly indicated.

Only two purely Muslim groups have been tabulated and of these the figure for Sayyids is so low as to make it doubtful if it represents a complete enumeration of the females of the group. This doubt arises from an examination of the returns under the head 'Pathan' which, though available from eight provinces and states, afford the very low ratio of 864 females per 1,000 males and suggest that either some of the Pathans enumerated were temporary visitors whose females reside outside the scope of census enumeration (*e.g.*, in the N.-W. F. P. Tribal Areas) or that females of the Pathan group have been returned as Muslims merely without specification of tribe. It is possible that something of this sort may have affected the returns of Sayyids also since the Muslim groups, except perhaps in the case of the Momins, are not by any means so clearly defined as are Hindu castes or primitive tribes. In the case of the latter again it must not be forgotten that under one head are sometimes included not only tribesmen living a detached and tribal life in their own hills but also Hinduised tribesmen whose life and customs are hardly if at all distinguishable from those of other castes occupying the same areas. Thus 'Sawara' includes not only the hillmen of the Ganjam Agency whose life and religion is purely tribal, but the Saharias of Gwalior who are completely Hinduised. This difference is perhaps reflected in their sex ratios, for the Gwalior Saharias have only 977 females per 1,000 males whereas the Madras branch of the tribe have 1,024 and the C. P. branch 1,043. It has already been pointed out that the highest female ratio is generally to be found either among primitive tribes or low castes, among both of whom marital cohabitation does not usually take place till approximate maturity is reached. The sex ratio is also similarly high among the *marumakkathayam* communities of the Malabar coast where female children are no less cared for than male and where, owing to the prevalence of adult marriage very early maternity is unusual.

Section ii.—Fertility.

Fertility statistics.

83. Figures of the size and composition of families, and statistics bearing on the rate of propagation in India are so inadequate that it was decided to attempt to obtain some figures of fertility at this census in spite of the many difficulties. The figures obtained will be found in Appendix I to Part ii (*Tables*) of this volume. Financial considerations were one obstacle and others were the difficulty of getting

ordinary enumerators, and the still greater difficulty of getting suitable persons to carry out the rather delicate enquiries needed for this purpose. In Baroda State the enquiries made were particularly careful and thorough, and the Census Commissioner for that State, Mr. S. V. Mukerjea, has dealt admirably with the whole subject in his report. In Travancore also 105,000 returns were collected, of which only 2·7 per cent. had to be rejected, and they have been carefully discussed in detail by Dr. Pillai. In the United Provinces the Local Government decided that no such enquiries could be made; but in most other provinces and states some attempt was made to obtain figures of fertility. Various agencies were used, generally educational or medical, and wherever possible the figures were collected through women. The total number of families for which returns of some kind were obtained was about 900,000 drawn from all grades of society and (except the United Provinces) from every part of India, so that the resulting figures may be taken as a well-mixed sample, though admittedly inadequate numerically. As the information obtained was very variable in degree and quality it was necessary to reject for one table or another those returns which were inadequate in some respect, and in consequence the numbers dealt with in each table fall very far short of the total number of returns received, amounting in some cases to less than half. In the tables volume gross figures have been compiled for India, with sub-totals by all communities for which more than one provincial figure exists. Thus in the case of Hindus a sub-total of 'Other Interior Castes' has been compiled, and a further sub-total of Yadavas; on the other hand no separate sub-total of Bafinda appears, as a separate figure for this caste is available for one state only, and as it can be found in the provincial figures there was no object in repeating the total for India. The figures that follow in this chapter are those compiled for India only, and for provincial or state sub-totals it will be necessary to refer to the Tables volume.

84. The first statement shows the proportion of male and female children returned as the first born of the families examined. Whether Jastrzebski's theory that the sex of subsequent births is influenced in the direction of masculinity or femininity by the sex of the first child be valid or not, it is likely that males will predominate among the first-born, as it seems to be a universal phenomenon that although fewer survive infancy more males are actually born than females, and this majority can hardly fail to be reflected in the proportions of male to female first-born. In any case the enquiry in Burma showed that in 61 per cent. of the families in which a girl was born first female children predominated, and in 75 per cent. of those in which the first-born was a boy, male children predominated, but the figures dealt with were not large. In Baroda, however, the figures of 29,000 families yielded precisely the same percentages. The corresponding percentages in Travancore were 52 and 61. The marginal table shows that there is a general, if not very exact, correspondence between the ratio of the sexes of first births and the ratios throughout India of the natural population of provinces, though the comparative symmetry of the figures is marred in particular those of by Delhi, the Punjab, the Andaman Islands, Mysore and the Central Provinces. At any rate it is clearly in the north-west that the female ratio is lowest among the first-born as among the total population, and in the south that it is, correspondingly, the highest. This rather suggests that the lower ratio of females to males in the north-west is due in part to an actual insufficiency of female births, though if the sex ratio of first births be maintained throughout subsequent births the Punjab and Delhi should show a higher survival rate than they do, as also Mysore.

Sex of first-born.

Province or State.	Number of females first born per 1,000 males first born.	Number of females per 1,000 males in natural population.
Baluchistan	566	832
Jammu and Kashmir ..	590	869
Baroda	699	923
Gwalior	726	908
Bengal	730	942
Central India	732	940
Delhi	759	793
Punjab	786	823
Central Provinces ..	795	1,004
Bombay	808	923
Western India States ..	829	965
Travancore	862	987
Andaman Islands ..	875	893
Assam	879	945
Madras	882	1,010
Cochin	924	1,023
Mysore	967	965

STATEMENT I.

Sex of First-Born.

Number of females first-born.	Number of males first-born.	Number of females first-born per 1,000 males first-born.	Number of slips examined.
238,462	305,963	779	575,495

Fertility and Age at Marriage.

85. The second statement shows the proportion of sterile to fertile marriages according to the duration of marriage, and the age of the wife at the time of marriage. No account is taken of still-born children and such are not counted as births at all in any of these tables. The general percentage of sterility in marriages that have lasted 15 years and over is 6 per cent. This percentage falls in the case of wives married under 12 years to 2 per cent. but the numbers available are few and the percentage unreliable for that reason. There is less reason to doubt the result in the case of wives married at 13 to 14 years of age when the percentage of sterility is only 4, rising to 7 in the case of wives married above the age of 14 years. These results have, however, to be read with those obtained from the next table which shows the average size of the family correlated to the age of the wife at marriage. Here we find that while the average number of children born from wives married at all ages is 4·2 and the survival rate 2·9, both the number born and the survival rate seem to increase with the age of the wife at marriage and are at the highest for wives married at 30 years and over, 5·1 and 3·6 respectively, while for wives married at 20 to 30 years they are 4·3 and 3·1. The general inference is that although an increase in the age of marriage for girls slightly increases the risk of the marriage proving sterile, possibly on account of greater exposure to sterilizing diseases, it also increases the number of children born alive when the marriage is, as it will be in at least 92 per cent. of cases, fertile, and it likewise increases the probability of survival to the children.

STATEMENT II.

Proportion of fertile and sterile marriages.

Age of wife at marriage.	Duration of Marriage. 0–4 years.		5–9 years.		10–14 years.		15 years and longer	
	Fertile.	Sterile.	Fertile.	Sterile.	Fertile.	Sterile.	Fertile.	Sterile
All Ages ..	164,491	71,502	213,807	41,930	214,696	27,433	444,161	26,513
0–12 ..	1,588	1,592	5,933	1,188	11,792	645	26,767	604
13–14 ...	63,803	28,590	93,718	16,982	91,871	10,106	203,135	9,509
15–19 ..	81,610	34,427	92,905	19,473	87,890	13,509	165,421	12,917
20–29 ..	15,751	6,085	19,350	3,711	20,710	2,727	43,098	3,020
30 and over ..	1,739	808	1,901	576	2,433	446	5,740	463

STATEMENT III.

Average size of family correlated with age of wife at marriage.

Wife married at	Number of families.	Number of children born alive.	Average observed.	Number of children surviving.	Average observed.
All Ages	568,628	2,368,172	4·2	1,661,448	2·9
0–12 years	40,729	154,120	3·8	112,127	2·8
13–14 years	191,783	809,891	4·2	552,345	2·9
15–19 years	249,874	1,022,209	4·1	726,118	2·9
20–29 years	75,758	328,181	4·3	232,804	3·1
30 years and over	10,484	53,771	5·1	38,054	3·6

Size of Family by Occupation.

86. In the fourth statement, which shows the size of family by the occupation of the husband, the average number of children born per family, which in this case is calculated on a smaller number of families, works out at the slightly higher figure of 4·3, and the survival rate obtained, 3·0, is similarly slightly higher. This is stated in the form of the numbers surviving per 1,000 born, 697 per 1,000 for all the families examined. The families are classified by occupation on the lines of the Occupation Table (X), but the result of this has been that the numbers

in some occupational orders, on which averages have been calculated, are really too small for any safe conclusion. The general average size of family is exceedingly constant about the number 4. In five instances it rises to 5·0 or over, the maximum being 5·6, but in three of these cases the numbers dealt with are very low. In the other two, where the numbers are higher, the rate may perhaps, be accepted. These two are the orders of Religion and of Persons living on their Income. In the latter the survival rate is also high, as might be expected, 712 per 1,000, though not as high as in the case of Law, Medicine and Instruction, where the survival rate is 760 per 1,000 while the average family is only 3·7. Apparently physicians, if unable to heal themselves, can yet heal their children. At any rate this is the highest survival rate found in any occupation, the next highest being those of the families of men employed in textile industries and in the Army, 731 and 729 respectively, with average families of 3·7 and 3·6. Public administration comes next with an average family of 3·9 and a survival rate of 721 per 1,000. The lowest survival rates, all those below 600 in fact, are calculated on figures too small to be worth considering, but it is possibly significant that the survival rate in Industry as a whole is only 687 children per 1,000 born, though the general level is in the neighbourhood of 700, and Class C (Public Administration and Liberal Arts) as a whole has the rate of 716, but with smaller families.

STATEMENT IV.

Size of families by occupation of husband.

N. B.—Totals in this table include figures which could not be distributed to sub-totals owing to the method adopted in compilation.

Occupation.	Number of families examined.	Number of children born.	Average per family.	Number of children surviving.	Proportion of total surviving to 1,000 born.
Total of all classes	**408,161**	**1,740,399**	**4·3**	**1,213,457**	**697**
A.—Production of Raw Materials	**223,391**	**978,750**	**4·4**	**683,540**	**698**
Exploitation of animals and vegetation ..	223,077	976,746	4·4	682,233	698
Pasture and Agriculture	*213,025*	*911,655*	*4·3*	*631,841*	*693*
Cultivation	*203,948*	*866,547*	*4·2*	*602,655*	*695*
Cultivating owners	*23,381*	*102,932*	*4·4*	*68,584*	*666*
Agricultural Labourers	*13,421*	*57,691*	*4·3*	*40,507*	*702*
Forestry	*139*	*529*	*3·8*	*355*	*671*
Stock-Raising	*5,038*	*20,487*	*4·1*	*13,847*	*676*
B.—Preparation and supply of Material Substances.	**92,323**	**387,301**	**4·2**	**266,963**	**689**
Industry	48,203	201,825	4·2	138,608	687
Textiles	*5,670*	*20,835*	*3·7*	*15,237*	*731*
Hides, skins and hard materials from the animal kingdom.	*57*	*255*	*4·5*	*154*	*604*
Wood	*1,521*	*6,220*	*4·1*	*4,192*	*674*
Sawyers, carpenters, turners and joiners ..	*24,705*	*106,492*	*4·3*	*71,716*	*673*
Metals	*688*	*2,628*	*3·8*	*1,756*	*668*
Blacksmiths, other workers in iron, makers of implements, workers in brass, copper and bell metal.	*959*	*3,674*	*3·8*	*2,582*	*703*
Ceramics	*181*	*678*	*3·7*	*458*	*676*
Chemical products properly so-called and analogous.	*215*	*823*	*3·8*	*586*	*712*
Food Industries	*983*	*4,269*	*4·3*	*3,043*	*713*
Industries of dress and the toilet	*8,147*	*31,678*	*3·9*	*22,118*	*698*
Building Industries	*1,117*	*4,506*	*3·8*	*3,053*	*673*

Occupation.	Number of families examined.	Number of children born.	Average per family.	Number of children surviving.	Proportion of total surviving to 1,000 born.
Construction of means of transport ..	*77*	*383*	*5·0*	*229*	*598*
Production and transmission of physical force.	*35*	*137*	*3·9*	*76*	*555*
Miscellaneous and undefined Industries ..	*4,310*	*18,475*	*4·3*	*12,573*	*681*
Scavenging	*3,547*	*15,428*	*4·3*	*10,485*	*680*
Transport	4,077	14,893	3·7	10,245	688
Transport by water	*297*	*1,544*	*5·2*	*1,002*	*649*
Transport by road	*1,499*	*5,660*	*3·8*	*3,784*	*669*
Transport by rail	*451*	*1,577*	*3·5*	*1,122*	*711*
Trade	*40,043*	*170,583*	*4·3*	*118,110*	*692*
C.—Public Administration and Liberal Arts ..	**34,453**	**139,219**	**4·0**	**99,701**	**716**
Public Force	2,671	10,464	3·9	7,108	679
Army	*1,543*	*5,486*	*3·6*	*3,999*	*729*
Police	*743*	*2,754*	*3·7*	*1,734*	*630*
Public Administration	19,232	74,688	3·9	53,842	721
Professions and Liberal Arts	12,550	54,067	4·3	38,751	719
Religion	*2,407*	*12,629*	*5·2*	*7,970*	*631*
Law, Medicine and Instruction	*7,360*	*27,412*	*3·7*	*20,824*	*760*
D.—Miscellaneous	**57,994**	**235,129**	**4·1**	**163,253**	**694**
Persons living on their income.	3,407	17,054	5·0	12,146	712
Domestic Service	6,401	24,068	3·8	16,526	687
Insufficiently described occupations ..	30,125	123,062	4·1	85,128	692
Labourers and workmen otherwise unspecified	*29,142*	*118,134*	*4·1*	*81,979*	*694*
Unproductive..	14,585	58,668	4·0	41,692	711
Inmates of jails, asylums and almshouses, beggars and vagrants	*2,204*	*9,551*	*4·3*	*6,774*	*709*
Other unclassified non-productive Industries	*58*	*326*	*5·6*	*204*	*626*
Unemployed and occupations unspecified	15,517	60,061	3·9	41,797	696

Size of family and duration of marriage by community.

87. The fifth statement correlates the duration of marriage with the community of the married and the number of quick births, and dealing with considerably larger numbers the average number of children born falls to 3·9, the lowest general figure yielded by any of these tables, but this of course is determined by the fact that large numbers of the marriages examined are incomplete. In marriages of ten to nineteen years duration the average number of children born is four and in marriages of 33 years duration and over it is 5·8 rising in the case of a few Kurmi marriages to 9, and in that of one Jewish family to 10. In Buddhist families on the other hand, where marriage is late, the average number born falls in cases of duration over 33 years and is at its highest in marriages of 20 to 31 years duration with an average per family of 6·1, only equalled in that duration term by Christians and Kurmis with the same number. The latter however rise to 7·0 in the later duration term in which the Buddhist average falls. Some conclusions can also be drawn from this table as to the frequency of births, the general inference being that two children are born alive during the first few years of marriage and that after ten years of married life have been accomplished the rate is approximately 1 child per decade up to 32 years of marriage.

In the sixth statement, which correlates the size of family to its community, the number of families examined is again rather fewer, and the total survival rate for 1,000 children born alive appears as 700 instead of the 697 yielded by Table IV, 700 being approximately the figure obtained likewise from Table III. The average per family, 4·3 in Table IV, is 4·2 by Tables III and VI, though it rises to 6·3 for Kayasthas and falls to 2·5 for Bhils. In the latter case the low birth-rate is compensated for by a high survival rate, 741, but the nomadic castes who have an average family of only 3·3 do not reach the general standard survival rate of 700, having one of 651 only, no doubt indicating the effects of their habits of life. The lowest survival rates are shown by Kurmis and Chamars, both under 600 and both having the majority of their wives married under 15 years of age, whereas the Sikh with the majority married over that age has a survival rate of 714, and the same combination of a high survival rate with a late age of wives at marriage appears in Parsis, Christians and above all in Buddhists, but the number dealt with in the first and third of these three communities is regrettably small, while Muslims, also with a majority of marriages with the wife aged 15 or over, have a survival rate of one below the general standard.

STATEMENT V.

Duration of Marriage correlated with Caste or Religion of Family.

Community of Husband.	Total.			Duration of Marriage with Present Wife.																	
				Under 10 years.			10 years.			10—19 years.			20—31 years.			32 years.			33 years and over.		
	Number of slips examined.	Number of children born alive.	Average per family.	Number of families.	Number of children born alive.	Average per family.	Number of families.	Number of children born alive.	Average per family.	Number of families.	Number of children born alive.	Average per family.	Number of families.	Number of children born alive.	Average per family.	Number of families.	Number of children born alive.	Averge per family.	Number of families.	Number of children born alive.	Average per family.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
India																					
Total	**899,783**	**3,477,211**	**3·9**	**218,240**	**373,197**	**1·7**	**47,931**	**148,153**	**3·1**	**268,487**	**1,073,908**	**4·0**	**259,738**	**1,266,330**	**4·9**	**20,583**	**121,909**	**5·9**	**84,804**	**493,714**	**5·8**
Hindus	509,257	2,002,396	3·9	125,179	207,513	1·7	26,042	75,362	2·9	158,172	616,987	3·9	137,332	737,251	5·4	13,924	83,536	5·8	48,608	281,747	5·8
Brahman ..	32,461	112,495	3·5	8,916	12,948	1·5	1,371	3,761	2·7	9,962	28,496	3·0	8,007	42,727	5·3	909	5,478	6·0	3,296	19,085	5·8
Other Interior Castes	83,309	316,527	3·8	21,778	30,074	1·4	3,847	10,247	2·7	24,638	95,079	3·9	24,415	129,798	5·3	1,684	9,953	5·9	6,947	41,376	6·0
Kayastha ..	706	2,722	3·9	167	237	1·4	27	67	2·5	121	506	4·2	121	644	5·3	55	213	3·9	215	1,055	4·9
Kurmi ..	316	1,409	4·5	90	177	2·0	20	62	3·1	111	539	4·9	76	462	6·1	2	17	8·5	17	152	9·0
Rajput ..	4,698	16,076	3·4	1,133	1,634	1·4	328	772	2·4	1,488	4,939	3·3	1,274	6,202	4·9	85	415	4·9	390	2,114	5·4
Viswakarma	1,847	6,461	3·5	473	710	1·5	140	382	2·7	605	2,171	3·9	470	2,521	5·4	28	147	5·3	131	530	4·0
Yadava ..	938	2,675	2·9	262	281	1·1	71	170	2·4	284	868	3·1	247	918	3·7	3	18	6·0	71	420	6·0
Nomadic Castes ..	197	653	3·3	71	104	1·5	14	30	2·1	41	158	3·9	51	256	5·0	6	21	3·5	14	84	6·0
Exterior Castes ..	36,761	44,678	3·9	9,823	7,117	1·7	2,255	7,055	3·1	11,281	46,277	4·1	10,206	54,671	5·4	537	3,166	5·9	2,659	16,392	6·2
Chamar ..	3,155	10,713	3·4	848	1,389	1·6	198	630	3·2	1,073	3,544	3·3	840	4,022	4·8	36	179	5·0	160	949	5·9
Sikhs	25,740	105,185	4·1	6,419	12,220	1·9	1,471	4,271	2·9	7,313	29,606	4·1	6,856	37,897	5·5	445	2,598	5·8	3,236	18,593	5·7
Jains	4,632	19,288	4·2	1,193	1,898	1·6	258	800	3·1	1,322	5,545	4·2	1,177	6,879	5·8	155	994	6·4	527	3,172	6·0
Buddhists	2,167	9,964	4·6	492	1,800	3·6	11	44	4·0	463	2,430	5·2	593	3,640	6·1	309	1,200	3·9	299	850	2·8
Parsis	1,127	4,823	4·3	170	299	1·8	40	120	3·0	288	1,248	4·3	303	1,559	5·1	50	230	4·6	276	1,367	5·4
Jews	7	41	5·9	2	6	3·0	1	10	10·0	2	11	5·5	1	4	4·0	..	..	..	1	10	10·0
Muslims	264,542	940,469	3·6	60,840	109,206	1·8	15,926	54,029	3·4	74,686	310,007	4·2	87,392	324,170	3·7	3,560	19,890	5·6	22,138	123,167	5·6
Christians	37,506	169,798	4·5	9,341	12,809	1·4	1,280	3,733	2·9	8,729	37,598	4·3	12,359	75,255	6·1	842	5,689	6·9	4,955	34,714	7·0
Tribal	28,155	116,407	4·1	6,612	11,548	1·8	1,228	3,579	2·9	8,950	35,122	3·9	7,619	43,441	5·7	884	5,190	5·9	2,862	7,527	6·1
Bhil	574	1,655	2·9	231	261	1·1	54	152	2·8	154	547	3·6	91	418	4·6	4	33	8·2	40	244	6·1
Other or Unspecified ..	26,650	108,840	4·1	7,992	98	2·0	1,674	6,205	3·7	8,652	35,354	4·1	6,106	36,234	5·9	414	2,582	6·3	1,902	12,567	6·6

STATEMENT VI.

Size of families by caste or religion of family.

Community.	Number of slips examined.	Total number of children born alive.	Average per family.	Number of children surviving.	Proportion of total surviving to 1,000 born.	Number of families with wife married at				
						0—12	13—14	15—19	20—30	30 & over
1	2	3	4	5	6	7	8	9	10	11
Total	**528,864**	**2,242,711**	**4.2**	**1,569,983**	**700**	**41,950**	**172,286**	**229,408**	**72,471**	**10,321**
Hindus	302,403	1,291,923	4·3	899,948	697	18,334	117,807	130,495	29,647	4,310
Brahman	7,875	40,599	5·2	26,255	647	541	4,149	2,423	413	91
Other Interior Castes ..	21,624	106,732	4·9	74,182	695	1,010	5,252	9,552	3,834	415
Kayastha	280	1,759	6·3	1,166	663	14	116	120	22	8
Kurmi	316	1,409	4·5	805	571	7	199	92	16	2
Rajput	1,168	5,637	4·8	3,896	691	157	215	571	170	55
Viswakarma ..	174	879	5·1	558	635	4	65	76	22	7
Yadava	257	1,011	3·9	674	667	80	61	85	28	3
Nomadic Castes ..	199	662	3·3	431	651	72	27	74	22	4
Exterior Castes ..	35,349	149,302	4·2	104,217	698	870	13,100	16,838	4,112	429
Chamar	859	4,847	5·6	2,860	590	63	440	243	87	26
Sikhs	23,391	96,550	4·1	68,982	714	3,872	4,713	10,633	3,655	518
Jains	1,739	7,240	4·2	5,044	697	38	867	765	65	4
Buddhists	617	2,357	3·8	1,916	813	..	32	221	281	83
Parsis	713	3,252	4·6	2,299	707	1	231	245	219	17
Jews	69	264	3·8	189	716	9	24	30	6	..
Muslims	141,526	577,778	4·1	403,704	699	12,543	29,871	61,420	32,408	4,756
Christians	22,396	111,546	5·0	85,699	768	1,475	6,178	11,563	2,887	293
Tribal	9,640	48,415	5·0	30,918	639	689	3,340	3,629	1,778	182
Bhil	396	1,006	2·5	745	741	77	83	191	40	5
Other or Unspecified	26,370	103,386	3·9	71,284	689	4,989	9,223	10,407	1,525	158

NOTE.—The total of columns 7-11 falls short of the figure in column 2 by 2,428 owing to the absence of details by age of wife at marriage for 2,406 families from Bengal and for 22 from the Andaman Islands.

General Conclusions.

88. It may be added in conclusion that the numbers examined in these fertility tables hardly admitof safe conclusions except on the broader lines. It is not unlikely that the results obtained for India as a whole bear a reasonable approximation to the general average for the whole country, deduced as they are from returns from half a million families or more of all kinds and conditions. On the other hand no broad generalization from the individual figures of a single caste can be regarded as of very much authority. There is also some doubt as to how far the returns given by the persons questioned represent really accurate statements of fact. At the same time the general conclusion may fairly be drawn that the average married woman in India has four children born alive and that 2·9 in every four, 70 % that is, survive. It is interesting to note that the Census Superintendent of Bombay arrives at a similar conclusion from a calculation based on the number of persons of varying ages per 1,000 houses. It may also be concluded that raising the age of marriage for women will not reduce the number of children but will increase the proportion of those that survive.

It may be added that although in all provinces 'baleful prophecies were rife' to the effect that the enquiry into fertility would arouse resentment and opposition and would have serious consequences, the prophets proved both false and foolish, for the enquiry did none of these things. A few people took umbrage at them, but those that did were not obliged to answer, and the collection of information was much easier and more efficient than in the attempts made in 1921. The employment of intelligent women for this purpose has many advantages.

SUBSIDIARY TABLE I.

General proportions per mille of the sexes by Provinces and States.

Province, State or Agency.	Actual Population.	Natural Population.
1	2	3
India	**940**	**940**
Provinces	**940**	**943**
Ajmer-Merwara	892	861
Andaman and Nicobar Islands	495	893
Assam (*including States*)	909	945
Baluchistan (*Districts and Administered Territories*)	717	815
Bengal	924	942
Bihar and Orissa	1,005	979
Bombay (*including Aden*)	901	924
Burma	958	1,025
Central Provinces and Berar	998	1,004
Coorg	803	922
Delhi	722	793
Madras	1,025	1,009
North-West Frontier Province (*Districts and Administered Territories*).	843	851
Punjab	831	824
United Provinces of Agra and Oudh	902	890
States and Agencies	**941**	**938**
Baluchistan States	855	850
Baroda State	942	923
Bengal States	886	939
Bihar and Orissa States	1,033	1,029
Bombay States	952	921
Central India Agency	948	940
Central Provinces States	1,010	999
Gwalior State	887	908
Hyderabad State	959	974
Jammu and Kashmir State	881	869
Cochin State	1,043	1,023
Travancore State	987	987
Other Madras States	1,079	1,062
Mysore State	955	965
North-West Frontier Province (*Agencies and Tribal Areas*) ..	864	888
Punjab States (*including Agency*)	832	816
Rajputana Agency	908	900
Sikkim State	967	986
United Provinces States	951	933
Western India States Agency	974	965

NOTE.—The estimated populations referred to on the fly-leaf of Table I in Part II of this Report have been included for purposes of calculating Actual and Natural population ; it being assumed for purposes of the latter figures that the entire population so estimated was indigenous.

SUBSIDIARY TABLE II.

Number of females per 1,000 males at different age-periods by main religions at each of the last three censuses.

Age.	All Religions.			Hindu.			Muslim.			Tribal.		
	1931.	1921.	1911.	1931.	1921.	1911.	1931.	1921.	1911.	1931.	1921.	1911.
1	2	3	4	5	6	7	8	9	10	11	12	13
0—1	1,012	991	1,001	1,017	993	1,004	999	983	991	1,045	1,009	1,020
1—2	1,044	1,027	1,041	1,051	1,030	1,046	1,030	1,021	1,029	1,078	1,055	1,067
2—3	1,058	1,058	1,050	1,068	1,066	1,053	1,040	1,045	1,046	1,090	1,098	1,080
3—4	1,018	1,085	1,065	1,024	1,098	1,074	1,003	1,066	1,051	1,057	1,101	1,098
4—5	980	1,017	1,001	989	1,019	1,002	955	1,007	993	1,013	1,059	1,035
Total 0—5	1,022	1,035	1,030	1,029	1,041	1,034	1,005	1,023	1,020	1,056	1,067	1,060
5—10	910	960	954	919	967	959	880	936	933	957	976	969
10—15	880	821	817	884	828	823	864	773	773	948	879	880
15—20	989	916	930	983	890	911	1,012	957	962	1,139	1,034	1,074
20—25	1,023	1,075	1,079	1,026	1,074	1,076	1,024	1,089	1,089	1,145	1,237	1,277
25—30	955	968	968	973	971	970	906	948	952	1,026	1,077	1,078
Total 0—30	961	956	960	967	957	960	945	943	947	1,033	1,021	1,036
30—40	891	905	910	912	922	933	824	842	854	957	967	937
40—50	866	902	912	886	922	928	798	836	854	891	873	879
50—60	910	926	950	940	947	973	815	848	867	967	923	965
60 and over..	994	1,040	1,092	1,055	1,101	1,151	825	871	921	1,124	1,106	1,173
Total 30 and over ..	899	927	944	926	951	967	815	846	866	957	949	952
Total All Ages	940	946	954	953	954	963	904	909	919	1,009	996	1,008

NOTE.—The figures in this statement relate to India proper, *i.e.*, exclude details for Burma, where the sort for age was by Race in stead of by Religion.

SUBSIDIARY TABLE III.

Number of females per 1,000 males at different age-periods by Religion.

Age.	All Religions.	Hindu.	Muslim.	Christian.	Tribal.
1	2	3	4	5	6
Total All ages	941	953	904	952	1,009
0—1	1,013	1,017	999	1,002	1,045
1—2	1,044	1,051	1,030	1,006	1,078
2—3	1,058	1,068	1,040	1,005	1,090
3—4	1,018	1,024	1,003	1,003	1,057
4—5	982	989	955	988	1,013
Total 0—5	1,023	1,029	1,005	1,001	1,056
5—10	912	919	880	959	957
10—15	884	884	864	949	948
15—20	991	983	1,012	1,003	1,139
20—25	1,023	1,026	1,024	1,001	1,145
25—30	952	973	906	945	1,026
Total 0—30	962	967	945	977	1,033
30—40	889	912	824	903	957
40—50	866	886	798	871	891
50—60	912	940	815	902	967
60 and over	994	1,055	825	947	1,124

NOTE.—The figures below All Religions relate to India as a whole but those for the respective religions refer to India proper, *i.e.*, exclude details for Burma where the sort for age was by Race instead of by Religion.

SUBSIDIARY TABLE IV.

Number of females per 1,000 males for certain selected Castes and Tribes.

Caste.	All Ages.	0—6	7—13	14—16	17—23	24—43	44 and over.
1	2	3	4	5	6	7	8
Baniya	881	994	892	837	881	834	860
Bhangi	909	985	824	837	986	914	867
Bhil	981	1,108	927	1,080	1,071	921	834
Brahman	902	980	875	828	917	878	911
Chamar	967	1,023	870	882	1,031	985	965
Chetti	1,011	1,098	970	1,048	1,045	928	1,057
Darzi	950	1,078	973	1,016	978	918	810
Dom	952	1,018	896	943	1,036	932	915
Gond	1,045	1,038	954	971	1,212	1,037	1,088
Gujar	832	961	782	763	887	815	764
Iluvan	1,026	1,003	970	1,023	1,142	1,030	1,036
Jat	805	936	794	730	808	782	744
Kachhi	879	1,005	800	831	934	846	853
Kahar	933	1,004	896	852	990	923	904
Kallan	1,083	1,017	988	890	1,218	1,151	1,119
Kayastha	888	996	896	823	914	845	855
Khatri	813	948	886	773	749	758	767
Kumhar	913	993	856	841	953	902	900
Kunbi	937	1,003	951	805	977	917	923
Mahar	1,001	1,041	920	965	1,082	987	1,024
Maratha	1,004	1,097	1,029	1,108	1,073	932	920
Megh	993	1,145	980	1,002	1,154	934	858
Momin (Julaha)	898	968	909	901	952	889	779
Naibrahman	903	1,007	852	799	900	902	892
Namasudra	961	1,080	893	1,053	1,105	920	830
Nayar (Nair)	1,049	989	980	991	1,122	1,056	1,153
Od	965	926	982	1,010	1,073	954	917
Pathan	864	979	811	789	863	870	812
Prabhu	883	1,063	923	1,023	1,006	677	884
Rajput	868	964	813	748	874	873	861
Santal	998	1,076	883	1,017	1,196	947	983
Shan	989	1,013	985	1,092	1,205	906	940
Tanti	1,058	1,046	918	961	1,227	1.095	1,092
Teli	979	1,022	933	883	1,104	971	943
Viswabrahman	905	989	901	841	959	879	853
Yadava	948	1,005	882	863	1,009	943	960

SUBSIDIARY TABLE V.

Number of deaths per 1,000 of the population for each sex at different ages as reported for British Districts in India.

Age.	1921.		1922.		1923.		1924.		1925.		1926.		1927.		1928.		1929.		1930.	
	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
0—1	205·16	190·14	183·21	166·38	182·56	167·99	196·72	179·94	181·21	167·02	196·61	179·57	174·01	159·30	180·93	164·32	185·46	169·49	189·12	171·88
1—5	54·11	49·61	41·22	36·74	43·63	39·75	52·67	47·44	45·42	40·79	52·13	46·80	48·82	43·83	48·16	43·48	51·83	46·94	57·11	51·25
5—10	15·25	13·81	10·56	9·62	10·88	10·29	12·93	12·13	10·27	9·56	10·83	10·16	10·12	9·35	10·04	9·56	10·11	9·56	10·74	9·96
10—15	10·84	10·34	7·99	8·01	8·54	8·83	10·46	10·98	8·10	8·28	8·44	8·97	7·55	7·90	7·53	8·20	7·15	7·75	7·21	7·54
15—20	13·60	15·36	10·46	12·23	10·80	12·91	13·30	15·58	10·77	12·88	11·33	14·05	10·50	13·19	10·40	13·74	9·96	13·16	10·25	13·13
20—30	16·16	17·15	12·23	13·20	12·23	13·52	14·37	15·68	12·23	13·25	12·55	14·24	11·98	13·88	12·03	14·50	11·56	14·03	11·65	14·05
30—40	19·44	19·02	15·04	14·56	14·66	14·51	16·99	16·89	14·59	14·09	14·94	15·03	14·46	14·47	14·63	15·00	14·20	14·67	14·25	14·79
40—50	26·28	22·02	20·44	16·81	19·85	16·76	22·65	19·50	20·27	16·53	20·38	17·25	19·52	16·26	19·81	16·71	19·85	16·74	20·18	17·19
50—60	41·13	35·87	32·18	27·25	31·28	27·06	35·38	31·14	31·64	27·15	32·57	28·23	30·56	26·31	31·08	27·04	31·96	27·84	32·48	28·53
60 and over ..	84·49	76·59	66·91	59·77	66·19	60·04	73·89	67·20	68·18	61·51	71·23	65·36	67·54	61·23	68·66	62·57	72·32	66·52	74·04	68·43

CHAPTER VI.

Civil Condition.

Instructions for enumeration.

89. The instructions issued to enumerators were to record for each individual whether he or she were unmarried, married or widowed. Divorced persons who had not remarried were to be entered in the third category. The instructions as regards the second category were that a woman who had never been married should be shown in the first category even though she were a prostitute or concubine, but that persons recognised by custom as married were to be entered as such even though they had not been through any proper ceremony, while persons living together whose religious or social tenets allowed cohabitation without preliminary formalities were likewise to be entered as married. The intention was to widen as far as possible the definition of marriage as used in 1921, since it is in no way the concern of the census whether a couple are legally married to one another or to other persons or not at all, if they are living together in such a manner as to beget children and form a family. Prostitutes who may be married to a god are rightly excluded, as far as the conditions of enumeration permit, from the census return of married, since though they may have children occasionally no family unit is constituted.

The statistics.

90. The general statistics of Civil Condition will be found in Table VII of part ii, and the figures of selected castes in Table VIII. Proportional figures are embodied in the subsidiary tables at the end of this chapter. It is evident at the first glance that the returns of Civil Condition are in very marked contrast to the figures of previous decades. The marginal figures show the number of males and females per mille of those aged 0—15 returned as married during the past 50 years. It will be seen that from 1881 to 1921 there has been a steady decrease of those married under the age of 15 years. This decrease has become an increase in 1931, for the number of married males under 15 has risen by 51% and the number of married females under 15 by 26% since 1921, an increase which is undoubtedly due to the enormous number of infant marriages which took place in the six months' interval between the passing of the Sarda Act and its coming into operation, some account of which has been given below. On the other hand Hindu widows under the age of 15 have fallen from 8 per mille in 1921 to 5·5 per mille, but while this may be taken as indicating a real decrease it is to be feared that the figures for the married cannot be taken at their face value. It is an obvious and striking fact that, although in all previous census figures the number of married women exceeds the number of married men, as must necessarily be the case in a country where there are a considerable number of polygynous marriages, on this occasion the figures are entirely reversed, presenting the impossible position of at least 601,244 married men with non-existent wives, and that at the maximum allowance of one each for those that have them. Polygyny is not widely practiced in India among either Muslims or Hindus, but it has been found at all previous census operations; the first half of the decade was prosperous and the economic check upon it unlikely to have operated before the end of the decade, and there is no reason to suppose that customs have changed to the extent of obliterating the very low ratio of eight co-wives to every thousand wives in a population of some three hundred million odd.* It is not to be supposed on the other hand that a practice has suddenly

Number of married per 1,000 of those aged 0—15 years.

Sex.	1881	1891	1901	1911	1921	1931
Males ..	63	59	59	54	51	77
Females ..	187	170	162	156	144	181

Persons returned as "married" in 1931.

Locality and Religions.	Females.	Males.
India (with Burma)		
All Religions ..	83,607,223	84,208,467
India proper—		
Hindu ..	58,353,082	58,663,574
Jain ..	266,941	267,510
Sikh ..	898,020	895,659
Buddhist ..	93,284	95,668
Muslim ..	18,241,410	18,300,813
Christian ..	1,213,375	1,219,421
Tribal ..	1,728,085	1,691,634
Others ..	127,655	130,254
Burma—		
All Races ..	2,680,877	2,934,902
Indigenes ..	2,527,527	2,516,134
Indians (Hindu and Muslim).	116,535	343,758
Indians (other) ..	7,533	16,015
All others ..	29,282	58,995

*An examination of the composition of families in a very limited area in Mysore disclosed 17 per cent. of co-wives to wives in Muslim and 3 per cent. in Hindu families, both a great deal higher rates than 8 per mille.

arisen of marrying males to a goddess ; nor can the excess of married males in 1931 be imputed to a sudden increase of polyandrous marriages. It is true that there are in the Himalayas a certain number of tribes or castes practising polyandry. Most of them are Buddhists, and finding, as we do, that married males exceed married females in that community, if Burmese Buddhists be excluded, and that this is a recurrent feature of Indian census returns, we may accept that excess as correct. An excess of Christian married males over married females is also a normal feature of Indian census returns, and may be imputed primarily to the numbers of married British soldiers, officials, etc., whose wives are in Europe. This excess of Christian married males is noticeably less than usual—6,046 as compared to 16,887 in 1921 and 19,656 in 1911. The excess is absent in the case of Tribal Religions and of Sikhs in both of which communities prepuberty marriage is very rarely if ever practised and in which the married women exceed the married men ; the unnatural excess can therefore be ascribed to Hindus, Jains and Muslims, at any rate in the main. It is not difficult to divine the cause In all these communities early marriage is practised, and the Sarda Act came into force a year before the census. Although that Act has in practice been virtually a dead letter, it is certain that a considerable number of persons who have married off their children in contravention of the Act will have hesitated to state specifically that a child aged so and so (and Age may be asked by the enumerator before Civil Condition) is married, knowing that such a statement will lay him open to the possibility of prosecution. Moreover in at least one case a Brahman association had bound its members not to divulge marriages made in contravention of the new law. The fact that the number of such concealments has been so much greater in the case of females than of males as to reverse the proportions of the married is the natural consequence of the fact that the bride is normally younger than the bridegroom and the impulse to conceal the age is therefore more frequent. It may be here added that more than one attempt was made to use the census schedules as evidence for prosecution under the Sarda Act, so that the fear of those who returned their married daughters under 14 as unmarried was not entirely ill-founded. It was ultimately ruled that the schedule had to be produced, an indication of faulty legislative provision for the protection of the census enquiry, but fortunately by that time the records had been compiled and the original schedules destroyed in accordance with the customary procedure.

Correction of error.

91. It is necessary therefore to arrive at some computation of the error involved. The proportion of married males and females, as returned in 1931, are 1,007 males to every 1,000 females, or 993 married females to every 1,000 married males. Now an examination of the sex proportions of the last fifty years shows that the number of married females per 1,000 married males varies from 1,005 to 1,011, and the number of married males per 1,000 married females from 989 to 993. The average works out at 1,008 married females, or 992 married males, per 1,000 married of the opposite sex. The existence of concealment of the marriage of females makes it more than probable that there has been concealment of the marriage of males also, but for the purposes of this computation it is necessary to assume that the number of males returned as married is correct ; clearly it is a minimum. Now to maintain the average marriage ratio of the past fifty years 85,000,000 married females are required, and for the lowest ratio found, that of 1891, at least 84,653,970 married females are required, whereas the actual number returned is 83,607,223. We are therefore brought to the unwelcome conclusion that at the very least 1,046,747 married females have been returned as unmarried, and that all these are under the age of 14 years, since otherwise there would be no purpose in concealing their married condition. In all probability the number is not less than one and a quarter million. Taking the lowest figure the ratio of females aged 0—15 who are married becomes 196 per 1,000 instead of the ratio of 181 indicated by the returns, an increase of 52 in every 1,000 married females aged 0—15, that is of at least 36 per cent. on the ratio of 1921, or considerably more than the 13 per cent. shown by the unqualified figures, and a reversion beyond the position of 1891. An attempt will be made below to distribute this concealment of married females as between different communities, but it is not possible to locate or to distribute it with any certainty as between different provinces. It is unlikely that much concealment has taken place in Indian States which have had no legislation comparable to the Sarda Act, and it may be taken as certain that Cochin and Travancore States have contributed little or nothing

to it, since infant marriage is not practised on the Malabar Coast. On the other hand it is inferred by the Census Superintendent for Rajputana from the statistics provided by that Agency that "recent legislation, although inapplicable to the States, has apparently had the effect of hastening on the marriages of immature persons of both sexes." It is possible however that this lowering of the age of marriage may be partially due, as pointed out elsewhere, to the automatic and inevitable action of the existing sex ratio aggravated by the ban on widow remarriage. In some cases a denial of marriage at the census may have been the result of failure by the bridegroom's party to provide the dowry promised, as cases of this kind are reported to have led to attempted repudiation of the marriage, when the census took place, in Tippera district in Bengal. An actual excess of 864,125 married males is to be found in Burma and in Bengal together. In Burma however they are all immigrants whose wives are likely to be found mostly in Madras or in the United Provinces, and the Burmans themselves do not in any case practise infant marriage, while Bengal usually has an excess of married males, mostly immigrants to Calcutta, equal to less than two thirds of their excess at this census. It has already been shown that this excess of 600,000 odd does not by any means represent the actual shortage of married females in the returns.

Group bias.

92. In considering the statistics there is another point which has to be borne in mind as regards the age groups. The method recommended by the actuary who examined the 1921 returns has been described in Chaper IV, and has greatly improved the value of the returns of age. This improvement however cannot equally be postulated of the age groups by civil condition. Under the old system of sorting directly into quinquennial groups there was a very heavy accumulation of returns at the ages ending in the digits 5 or 0, but the consequent error was the same for both Age by itself or Age as a factor in Civil Condition. The method adopted at this census has improved the returns of age without effecting an equivalent improvement in the age groups when read with civil condition, as the number of individuals of any civil condition is not identical with the total returns of any given age. Thus of those returned as aged 14-16 there will be a greater number married at the latter age than at the former, and by dividing the group into equal halves of which one contributes to the group 10—15 and the other to the group 15 to 20, the numbers of married shown in the lower age group will be increased beyond their correct proportion and conversely the number of unmarried in the higher group will also be proportionately inflated. The error caused will only be seriously operative up to the point at which the vast majority become all of the same married condition, and again at the point at which many become widowed; and it would appear from the returns that its effect has been to counterbalance the tendency to over-estimate the age of young married females which has been indicated in all previous census returns. An excellent example of the actual effect of the working of the method of smoothing on the ages of the married and widowed will be found in the following table which is taken from the Report on Bihar and Orissa :—

Age.	Married.						Widowed.					
	Actual number.			Number per mille.			Actual number.			Number per mille.		
	Persons.	Males.	Females.	P.	M.	F.	Persons.	Males.	Females.	P.	M.	F.
					Unsmoothed.							
4—6	360,698	131,019	229,674	88	63	112	12,132	3,795	8,337	3	2	4
7—13	2,105,252	839,474	1,265,778	288	217	368	56,322	19,546	36,776	8	5	11
14—16	1,472,192	583,066	889,126	593	448	753	43,328	15,984	27,344	17	12	23
17—23	3,742,710	1,478,972	2,263,738	796	667	919	148,560	48,242	100,318	32	21	40
					Smoothed.							
4—5	120,231	43,673	76,558	87	64	112	4,044	1,265	2,779	3	2	4
5—10	1,232,978	485,247	747,726	216	163	273	34,227	11,670	22,557	6	4	8
10—15	1,788,722	711,270	1,077,452	366	275	467	49,825	17,765	32,060	10	7	14
15—20	2,697,451	1,031,019	1,576,432	726	586	860	95,944	32,113	63,831	27	18	35
20—25	3,103,157	1,319,723	1,783,434	826	734	910	151,277	48,810	102,467	40	27	52

The exact working of the age group bias is, however, better illustrated still by figures for Gwalior State whence returns by annual ages were available up to 16 years. The following statement shows these returns as compiled from the schedule; the operation of preferences for certain digits is obvious :—

Actual returns of Age by Civil Condition for Gwalior State, excluding Nimach Cantonment.

		Males.			Females.		
Age.	Total.	Unmarried.	Married.	Widowed.	Unmarried.	Married.	Widowed
0	62,851	32,069	110	19	30,382	222	49
1	96,846	48,174	235	31	47,852	463	91
2	96,630	47,406	445	37	47,788	890	64
3	102,798	49,371	556	47	51,566	1,111	147
	94,436	47,285	842	125	44,404	1,479	301
5	106,718	54,187	784	109	49,317	2,005	316
6	94,943	48,010	939	164	43,105	2,324	401
7	91,828	44,920	1,134	133	41,902	3,492	247
8	105,305	54,283	1,987	125	43,182	5,462	266
9	64,821	31,132	1,676	114	25,729	5,937	233
10	116,624	59,072	5,715	343	35,945	14,812	737
11	50,256	23,276	2,804	142	14,657	8,945	432
12	124,198	60,973	10,504	523	22,621	28,758	819
13	46,485	20,489	5,384	287	6,628	13,254	443
14	62,423	25,676	8,563	446	6,469	20,505	764
15	97,901	34,653	17,772	874	6,246	37,082	1,274
16	100,518	29,160	23,460	1,140	4,775	40,301	1,682

The next statement shows the same figures as grouped by sorters into the alternate ternary and septenary groups (from 4 years upwards) as they would have been if sorted direct into groups as was done elsewhere :—

		Males.			Females.		
Age.	Total.	Unmarried.	Married.	Widowed.	Unmarried.	Married.	Widowed.
0	62,851	32,069	110	19	30,382	222	49
1	96,846	48,174	235	31	47,852	463	91
2	96,630	47,406	445	37	47,788	890	64
3	102,798	49,371	556	47	51,566	1,111	147
4—6	296,097	149,482	2,565	398	136,826	5,808	1,018
7—13	647,527	342,155	29,204	1,667	190,664	80,660	3,177
14—16	260,842	89,489	49,795	2,460	17,490	97,888	3,720

The third of these statements shows the final appearance of these figures in the adjusted groups, in which the figures for marriage and widowhood in the group

5–10 are clearly inflated at the expense of the higher group 10–15, though the figures of the lowest group are little affected.

Age.	Total.	Males.			Females.		
		Unmarried.	Married.	Widowed.	Unmarried.	Married.	Widowed.
0—1	*123,822*	*56,238*	*313*	*43*	*66,376*	*748*	*104*
1—2	*97,940*	*48,338*	*406*	*48*	*47,988*	*1,051*	*109*
2—3	*98,697*	*48,503*	*576*	*64*	*48,188*	*1,212*	*154*
3—4	*100,751*	*49,599*	*706*	*91*	*48,588*	*1,524*	*243*
4—5	*98,699*	*49,827*	*855*	*133*	*45,609*	*1,936*	*339*
0—5	519,909	252,505	2,856	379	256,749	6,471	949
5—10	373,115	195,991	15,030	901	118,137	41,298	1,758
10—15	316,980	142,740	32,413	1,681	67,814	69,593	2,739

For comparison with the above the figures are given below grouped as they would have been had the 1921 method of return to last (instead of nearest) birthday been followed and the figures sorted direct into quinquennial groups by the method followed at that census :—

Age.	Total.	Males.			Females.		
		Unmarried.	Married.	Widowed.	Unmarried.	Married.	Widowed.
0—1	*111,276*	*56,156*	*228*	*35*	*54,308*	*454*	*95*
1—2	*96,737*	*47,790*	*340*	*34*	*47,820*	*676*	*77*
2—3	*99,715*	*48,389*	*500*	*42*	*49,677*	*1,001*	*106*
3—4	*98,617*	*48,328*	*699*	*86*	*47,985*	*1,295*	*224*
4—5	*100,577*	*50,736*	*813*	*117*	*46,861*	*1,742*	*308*
0—5	506,922	251,399	2,580	314	246,651	5,168	810
5—10	468,568	234,974	8,986	762	196,549	25,623	1,674
10—15	390,623	177,277	38,998	2,006	71,470	97,409	3,463

The figures are next shown in the form of a distribution of 1000 of each civil condition between the ages of 0 and 15 first according to figures reached by the 1931 method and then comparatively by figures provided by the 1921 method :—

Age.	Unmarried.		Married.		Widowed.	
	1931 method.	1921 method.	1931 method.	1921 method.	1931 method.	1921 method.
			(a) Males.			
0—1	*95*	*85*	*6*	*4*	*15*	*11*
1—2	*82*	*72*	*8*	*7*	*16*	*11*
2—3	*82*	*73*	*11*	*10*	*21*	*14*
3—4	*84*	*73*	*14*	*14*	*31*	*28*
4—5	*84*	*76*	*18*	*16*	*44*	*38*
0—5	427	379	57	51	127	102
5—10	332	354	299	178	303	247
10—15	241	267	644	771	570	651
			(b) Females.			
0—1	*150*	*106*	*7*	*4*	*19*	*16*
1—2	*108*	*93*	*9*	*5*	*20*	*13*
2—3	*109*	*96*	*10*	*8*	*28*	*18*
3—4	*110*	*93*	*13*	*10*	*45*	*33*
4—5	*103*	*91*	*16*	*13*	*62*	*52*
0—5	580	479	55	40	174	137
5—10	267	382	352	200	323	281
10—15	153	139	593	760	503	582

Finally the following table, taken from the Gwalior Report, shows the comparative distribution by civil condition of 1000 of each sex at the three main age

groups first as arrived at by the 1931 method, and then as reached by the 1921 procedure :—

Civil Condition.	0—5		5—10		10—15	
	Males.	Females.	Males.	Females.	Males.	Females.
Unmarried	988	974	930	784	822	529
Married ..	11	22	66	207	169	453
Widowed ..	1	4	4	9	9	18
Unmarried	989	976	960	878	812	415
Married ..	10	21	37	114	179	565
Widowed ..	1	3	3	8	9	20

It is quite obvious that in the tables as they stand in part *ii* of this volume the high figures of marriage at the group 5—10 will be misleading. On the other hand it must unfortunately be pointed out that the necessity of allowing for an adjustment of not less than one million girls returned as unmarried though actually married has to be balanced against the bias indicated above, to say nothing of the tendency to exaggerate the ages of young married girls. When allowing for the adjustment of misstated civil condition, the age-bias, inflating group 5—10 as regards the married, may be regarded as operating to adjust the difficulty of distributing to different groups the numbers of those inaccurately returned as unmarried in 1931. It will of course be quite clear that this corrective was not intentional, and would have been avoided had the bias given to the returns of Civil Condition been detected in time. This could easily have been done by sorting for civil condition before sorting for age, but when the Census Superintendent of Bengal, the first of us to detect the bias, pointed it out, sorting had everywhere been completed. Ages as stated to enumerators in India are always so inaccurate, and the old method of grouping under which the age returns were influenced by preferential digits was so unsatisfactory, that it cannot be held that the inaccuracy of the grouping by Civil Condition is necessarily any greater at this census than in previous decades, but it probably is, and in any case it is unfortunate that the greater accuracy which might have been obtained by reversing the order of sorting must be deferred to the next census, and even if the method used has acted as a corrective in one respect it would have been more satisfactory to have been able to ascertain that error precisely and to apply the necessary corrective afterwards. Meanwhile it is necessary to bear in mind this flaw in grouping when considering the increase in infant marriage disclosed in the returns which form another point in striking contrast to those of recent decades. Were the returns of married females complete it would be clear that some allowance would have to be made for the tendency towards weighting the lower ages at the expense of the higher. As however it must be taken as quite certain that some million married girls under 14 years of age have been returned as unmarried, and in all probability a still larger number of girls and a considerable number of boys, the returns as they stand may be taken as an indication correct enough of the proportion of married at the more infantile ages, and to correct the weighting caused by the method of grouping the correction necessary in the figures of the married may be made to fall entirely at the highest age groups possible. For the purposes therefore of the marginal table a transfer of 1,046,747 females has been made from the category of unmarried to that of married and shown entirely under the highest age group under 15 years. The weighting of the lower age groups will be more apparent in the case of the widowed. Not only will the tendency for the returns of widowed to be more numerous at the higher age groups be greater, and

Census of	Married persons per 1,000 of the population aged													
	0 to 1.		1 to 2.		2 to 3.		3 to 4.		4 to 5.		5 to 10.		10 to 15.	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
1881	(0—10, *males 24 and females 75*)												151	500
1891 . ..	(0—5, *males 5 and females 13*)										36	123	154	494
1901	2	3	3	6	5	9	8	16	13	27	36	102	134	423
1911	2	3	4	7	6	11	9	17	14	30	37	105	129	430
1921	1	2	3	5	4	8	7	13	12	23	32	88	116	382
1931	7	8	8	12	12	20	22	42	31	66	79	193	149	381

the inequitable distribution to lower age groups therefore greater, but the inclination to concealment or to exaggerate age will perhaps have been less, in which case the bias involved by the method of sorting will be less balanced by its operation as a corrective. Except in the case of Hindus and Jains the numbers are not of any very great significance as elsewhere the ban on remarriage does not exist. In the case of Hindus and Jains the number of widows at each age group in 1931 should lose a certain proportion to the group above, and the actual state of widowhood as presented by the 1931 census figures is actually a little better than it appears to be from the record, indicating a very remarkable decrease in the number of child widows during the last ten years. It is to be feared that unless the practice of the remarriage of child widows is greatly extended during the coming decade, the reduction found at this census will be found in 1941 to have been converted again to a grave increase as a result of the great increase that took place during the early months of 1930 in child marriages hurriedly undertaken to forestall the Sarda Act. Indeed the year that elapsed between the rush of anticipatory marriages and the taking of the census left time enough for many infants married in haste to become widows for life, and the marked rise in the number of widows under ten years as compared with 1921, in spite of a decline in the proportion of widows on the whole, is probably significant of sorrows to come, particularly as, if widows under five years alone be examined, the 1921 figures are found to have more than doubled. It is likely that there was no marked lowering of the age of marriage until 1930, although as pointed out elsewhere an excess of males will tend in that direction ; it is evident, however, if only from the increase of married aged 0-3 where the possible influence of sorting methods is inoperative, that there has been a decided temporary fall in the age of marriage ; this fall is probably attributable almost entirely to anticipation of the Marriage Restraint Act.

Census of	Hindu and Jain females returned as widowed per 1,000 aged						
	0-1	1-2	2-3	3-4	4-5	5-10	10-15
1881	*(0—10—2·9 per 1,000)*						21·1
1891	*(0—5—0·7 per 1,000)*					4·1	16·1
1901	0·3	0·6	0·7	1·3	2·9	5·7	20·6
1911	0·3	0·4	0·5	1·2	2·5	5·5	17·3
1921	0·2	0·3	0·5	0·9	2·2	5·5	20·5
1931	0·3	0·4	0·7	1·9	3·2	5·7	11·3

Marriage Ratios of Communities.

93. It was stated above that some attempt would be made to distribute by religion the 1,046,747 or so married girls under 14 who must have been returned as unmarried. It is assumed that in view of the extraordinary rush to get children married before the operation of the Sarda Act, and of the large number of married who have undoubtedly been returned as unmarried, it is justifiable to calculate for individual communities on the mean ratio of married females found, although for the total ratio for all communities the lowest recorded proportion of married females to males has been taken. Now the mean of the highest and lowest recorded Muslim ratios of married women to married men found from 1881 onwards is 1,018 married women to 1,000 married men. To make up this ratio 366,598 more married women are required than have actually been returned. Similarly the mean Hindu ratio of married women to married men found from 1881 onwards is 1,006. To make the number of married women up to this ratio another 627,890 Hindu women should have been returned as married. The ratio between these figures for Hindus and Muslims corresponds nearly enough to the ratio between the actual excess numbers of married males returned by each community from India and Burma together when Burmese Muslims are excluded. Similarly 999 Jain and 4,716 Sikh females need to be transferred from unmarried to married to raise their ratios respectively to the mean of the highest and lowest possible figures since 1881. This accounts for all but 46,544 of the minimum numbers required, and this must be left to be accounted for by the other communities or by still higher ratios, for it is not impossible but that the actual ratios of married females to married males are even higher than those assumed. If the additional numbers of married females

Number of males returned as married in excess of total of married females of the same community.	
Hindu	468,051
Muslims	134,067
Jain	569

under 14 years actually arrived at be now transferred from the unmarried females aged 0—15 to the married of that age, the rates per 1,000 come to 213 and 210 for Hindus and Muslims respectively instead of 199 and 186. Jains are raised from 125 to 130, and Sikhs from 80 to 86 married females per 1,000 aged 0—15. The table in the margin shows the number of females per 1,000 aged 0—15 who were returned as married for six decades in five religious communities.

Community.	Married females aged 0-15 per 1,000 females of that age.						
	1881.	1891.	1901.	1911.	1921.	1931.	1931 *as adjusted.*
Hindu	208	193	186	184	170	199	213
Muslim	153	141	131	123	111	186	210
Jain	189	172	164	130	117	125	130
Sikh	120	143	101	88	72	80	86
Christian	33	37	38	39	32	43	..

Clearly this vitiation by false returns of the numbers of unmarried females must be taken into account in any consideration of civil condition. Thus while the proportions of the unmarried, married and widowed returned at the census are :—

Males .. unmarried 47·9%, married 46·7%, widowed 5·4%,

Females .. unmarried 35·2%, married 49·3%, widowed 15·5%,

these figures if applied to the actual numbers, merely result in the absurdity of married males whose wives are unmarried. It is therefore necessary to correct them to the extent already indicated together with certain component parts, and the resulting percentages are given in the marginal table. Figures of Northern Ireland (1926) are added for the sake of comparison. In the diagram that follows no attempt has been made to distribute the married returned as unmarried which probably remain after the adjustment of the Hindu, Jain, Sikh and Muslim ratios as above. The Christians, who are likely to have a good many of them, show a higher ratio of married females to married males than ever before, and the other communities show no such marked change in proportions as would enable any definite transfer from the unmarried to the married category.

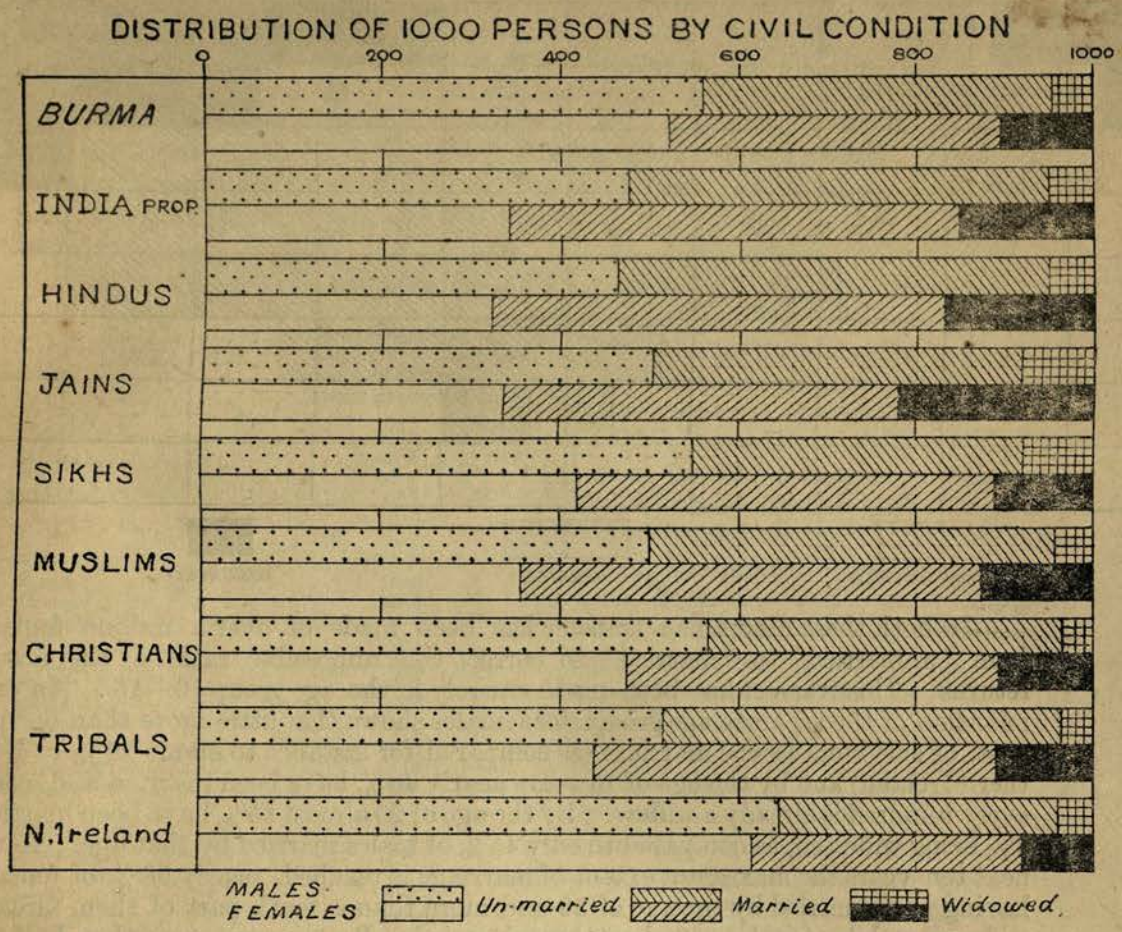
Unit.	Sex.	Unmarried.	Married.	Widowed.
INDIA ..	males ..	47·9	46·7	5·4
	females ..	*34·6*	*49·9*	*15·5*
Burma ..	males ..	56·1	39·2	4·7
	females ..	*52·1*	*37·4*	*10·5*
India (*ex*- Burma).	males ..	47·6	47·0	5·4
	females ..	*33·8*	*50·5*	*15·7*
Hindus ..	males ..	46·3	48·0	5·7
	females ..	*32·4*	*50·7*	*16·9*
Jains ..	males ..	50·3	41·5	8·2
	females ..	*33·7*	*44·2*	*22·1*
Sikhs ..	males ..	55·0	37·0	8·0
	females ..	*41·1*	*47·5*	*11·4*
Muslims ..	males ..	50·0	45·6	4·4
	females ..	*35·8*	*51·3*	*12·9*
Others ..	males ..	53·6	42·6	3·8
	females ..	*45·2*	*43·9*	*10.9*
Northern Ireland.	males ..	64·4	31·5	4·1
	females ..	*61·1*	*30·5*	*8·4*

Marriage Ratios by Age.

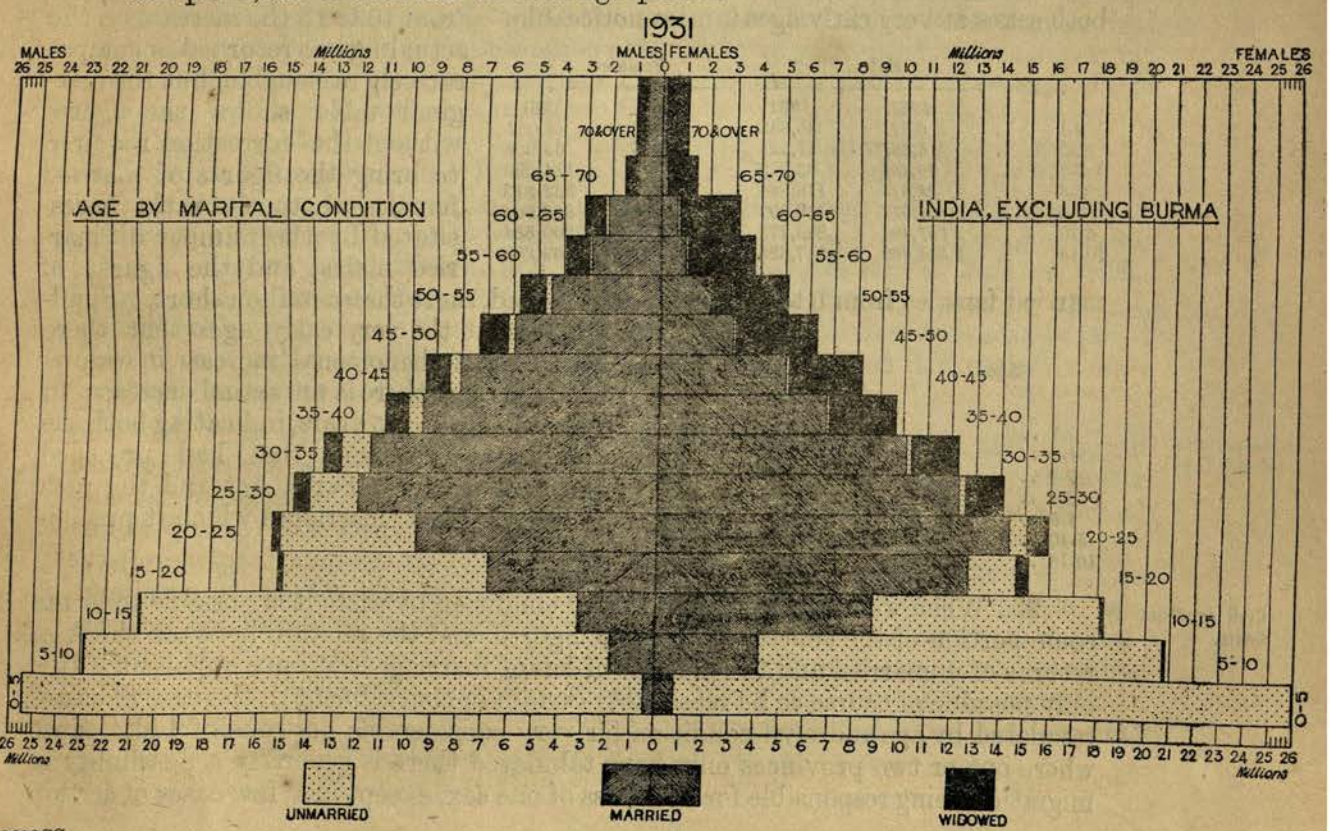
94. Similarly when examining the ages of the married it is necessary to take into account the false returns of unmarried so far as possible. These false returns must be assumed to refer in any case to females married under the age of 14 years so that the adjustment is simple enough when considering the proportionate ages of the married, provided the ages below 15 years are not considered separately. The marginal table therefore shows for each sex the percentage of married persons who are under the age of 15 years. It is at once noticeable that the ratio of females married under 15 is higher among Muslims than among Hindus, nor is this merely the result of the adjustment, carried out above, of the million odd married females returned as unmarried; on the bare figures as returned at the census the Muslim ratio of married females under 15 years to the total of married females is higher than the Hindu ratio. In 1921 the Hindu ratio was 4% higher than the Muslim. In England and Wales in 1921

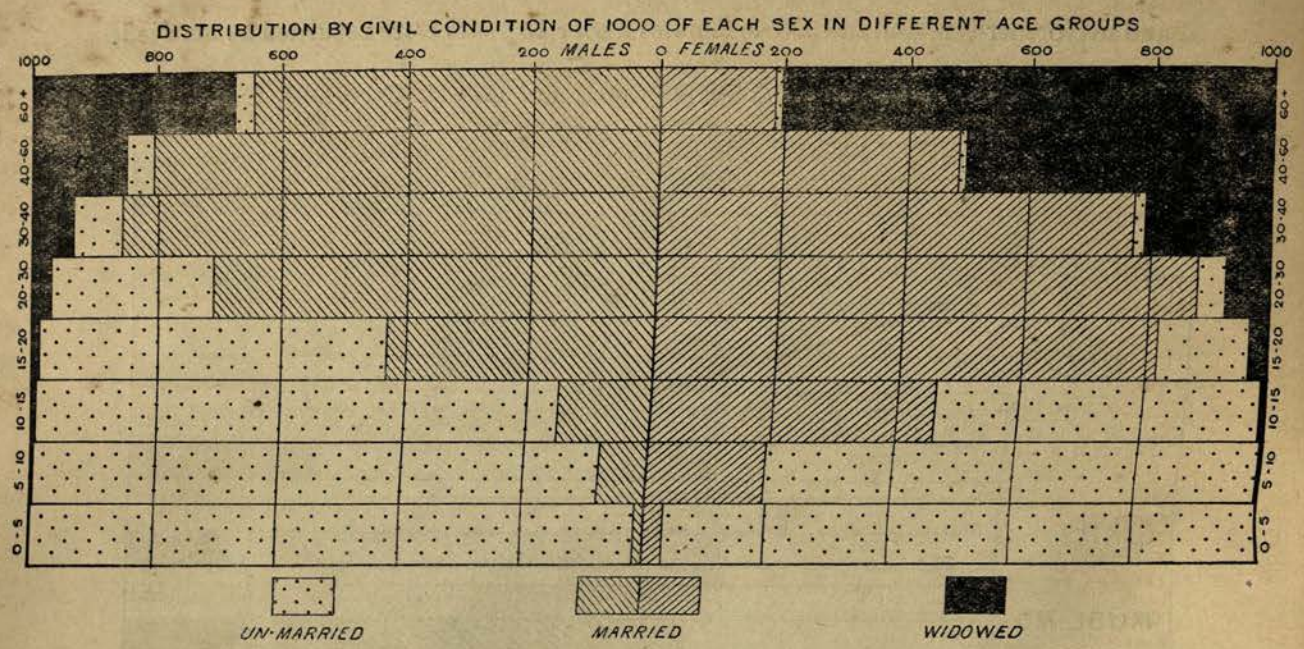
Province, etc.	Number per 1,000 of total married who are under 15 years.	
	Males.	Females.
India	65·7	157·3
Burma	1·8	6·7
India Proper	68·0	161·8
Hindu	*73·1*	*164·1*
Jain	*32·5*	*108·3*
Muslim	*59·4*	*174·3*
Tribal	*49·6*	*93·3*
Sikh	*26·9*	*74·6*
Christian	*15·4*	*43·3*

and in Northern Ireland in 1926 no females under 15 years were returned as married.



Some examination of civil condition by actual age groups seems called for, and the accompanying diagrams show in one case an age group pyramid, based on the actual numbers returned at each age period, which also displays the marital condition of each group, and in the other a representation of the ratio of marital condition per 1,000 of each sex at each age period.





In both these diagrams a transfer has been made of over a million females from 'unmarried' to 'married' to correct the impossible ratio of the actual returns. This transfer has been made entirely in the age group 10—15. An examination of the separate age groups for females shows that little more than one per cent. of survivors escape marriage (as compared for instance to about 26% in Northern Ireland) and by the age of 15 years nearly 40% have been married and one in every hundred is already a widow. By the age of 20 almost 85% have been married, 3% being widowed, as compared to only 45% of males married by that age. In the next ten years the maximum extent of marriage is reached, nearly 98% of females having been married by the age of 30 and more than a tenth part of them already widowed, while of males 86% have been married. By 50 years more than half the female population of that age are already widows, though only 15% of the males of that age are widowed, and of females over 70 years more than 85% are widows, although less than 40% of males over 70 are widowers. In Northern Ireland 48% of women aged 65 and over or 62% of those aged 75 and over are widows, and of males over 65 over 29% are widowers. The tremendous increase in the married of both sexes at very early ages is most noticeable. From 10 to 15 the increase on the actual figures returned is comparatively reasonable, but the marginal table shows the figures without the correction required to bring the figures of married females up to the ratio necessitated by the number of married males, and the figures of married females from 0 to 15 appear as returned, more than a million short. Similarly it is at the very early ages that there has been a phenomenal increase in widowhood, though there is an actual decrease in widows of 10 to 15 years, indicating both the definite improvement that had preceded the passing of the Sarda Act and the rush of hasty infant marriages which it precipitated.

Age.	Males.		Females.	
	1921.	1931.	*1921.*	1931.
0-1 ..	*6,921*	36,882	*9,066*	44,082
1-2 ..	*6,687*	41,228	*11,595*	63,954
2-3 ..	*16,484*	63,375	*32,197*	114,099
3-4 ..	*28,915*	118,844	*60,755*	232,813
4-5 ..	*51,677*	168,897	*104,850*	346,904
5-10 ..	*757,405*	1,883,773	*2,016,687*	4,200,534
10-15 ..	*2,344,066*	3,217,626	*6,330,207*	7,269,208

Age.	Widows.	
	1921.	1931.
0-1	*759*	1,515
1-2	*612*	1,785
2-3	*1,600*	3,485
3-4	*3,475*	9,076
4-5	*8,693*	15,019
5-10	*102,293*	105,482
10-15	*279,124*	185,339

Civil condition by Caste.

95. When we come to examine civil condition by caste it is possible to locate some portion of the concealed marriage figures, and the relation between the false returns of unmarried and the practice of infant marriage is at once apparent. It is only possible of course to be reasonably certain of concealment in the case of castes tabulated by age and civil condition for very considerable portions of India, since where one or two provinces only have tabulated there is generally a possibility of migration being responsible for an excess of one sex, except in a few cases of certain

castes of limited range. Thus of the 627,890 missing married Hindu females only about 267,000 to 268,000 can be located by the excess of married males in certain castes. Bengal Brahmans lead the way with 55,500 married males in excess of females, Brahmans elsewhere making up the total to 85,000. Kayasthas have an excess of 40,600, Rajputs of 34,000, Yadavas of 26,000, Komatis of 13,000, Kunbis of 17,000 and the 'Viswabrahman' group of artizan castes 14,000 between them. Khatris have 9,000, Namasudras 7,700, Kumhars 5,000, Gadarias 2,800 and Baidyas 1,600. Of the tribes Santals have 4,500 and Bhils 2,600. Few Muslim groups have been tabulated, but, of the few that have been, both Sayyids and Momins show an excess of 7,000 husbands, accounting for 14,000 of the 366,589 needed.

In the marginal table a number of castes are shown in the order of prevalence of infant marriage. This list must be taken as a sample only, and the incidence of infant marriage has been calculated on the number of females returned as married aged 0 to 6 years. No attempt has been made to adjust the ratios for the concealed marriages as the ages of these are not known, and it is clear that several of the castes mentioned above, *e.g.* Brahmans, Kayasthas, Rajputs, Komatis, Yadavas, would stand higher in the list than they do had they not concealed their marriages carried out in contravention of the Sarda Act between April 1930 and February 1931, while the Kunbi or Kurmi group would probably take the unenviable place at the head of the list which would seem to be theirs by prescriptive tradition. In any case their high ratio of infant marriage supports the speculation made in paragraph 97 of this Chapter (*cf.* also Chapter XII page 457). In the provincial volumes the castes in Table VIII should be arranged in order of the prevalence of infant marriage, but as this order is likely to vary from province to province even for the same castes, and as very few castes indeed have been tabulated for the whole of India in Table VIII, the marginal list can only claim to give an indication of the relative position of various important castes with regard to the age of marriage. A reference to Table VIII (part II of this volume) will show that the general caste figures were largely influenced by the numbers located in the United Provinces, where a low age of marriage seems more universal than in other provinces. In the case of the Pathans shown in the list the U. P. figures alone have been given, and the ratio should not be regarded as at all typical of Pathans elsewhere. Only two other Muslim groups are given, that of weavers shown collectively as Momin, and Sayyids; the rest are Hindu, Jain or Tribal. For it will be noticed that even tribes like Oraons and Santals appear in the list, but there is every reason to suppose that infant marriage in their case is an acquired habit, as it is not common to the Austroasiatic tribes, though it is probably more natural to Kunbis than it is to Rajputs.

Caste.	Females aged 0-6 married or widowed per 1,000 of total females in the caste.
Tanti	25·1
Kunbi	20·5
Bhar	15·9
Maratha	15·7
Yadava	12·6
Dom	12·1
Mahar	11·9
Komati	10·6
Chamar	10·3
Shaha	9·1
Teli	9·1
Momin	9·0
Darzi	8·9
Dhobi	8·6
Gadaria	8·2
Nai	8·2
Pathan (U. P.)	8·0
Sawara	7·6
Lingayat	7·3
Kumhar	7·1
Namasudra	7·1
Megh	6·7
Gond	6·6
Od	6·5
Kahar	5·5
Kayastha	5·1
Oraon	4·6
Santal	4·2
Brahman	3·6
Sayyid	3·6
Kachhi	3·5
Rajput	3·4

96. It is hardly necessary to point out that marriage as found and returned by an Indian census is not to be understood in the sense of marriage as returned in an European census, in which effective cohabitation of man and wife is a normal assumption. The practice of child marriage involves as a necessary corollary some postponement of effective marriage, and in the case of Muslims and of the majority of Hindus prepuberty consummation is not practised, though the prevailing Hindu custom certainly involves consummation at a very early date thereafter. On the other hand it is not accurate to state, though the statement is frequently met, that the Hindu child marriage is merely an "irrevocable betrothal". Apart from the fact that this expression is a contradiction in terms, for betrothal implies the possibility of breaking a troth which has only a moral obligation as its

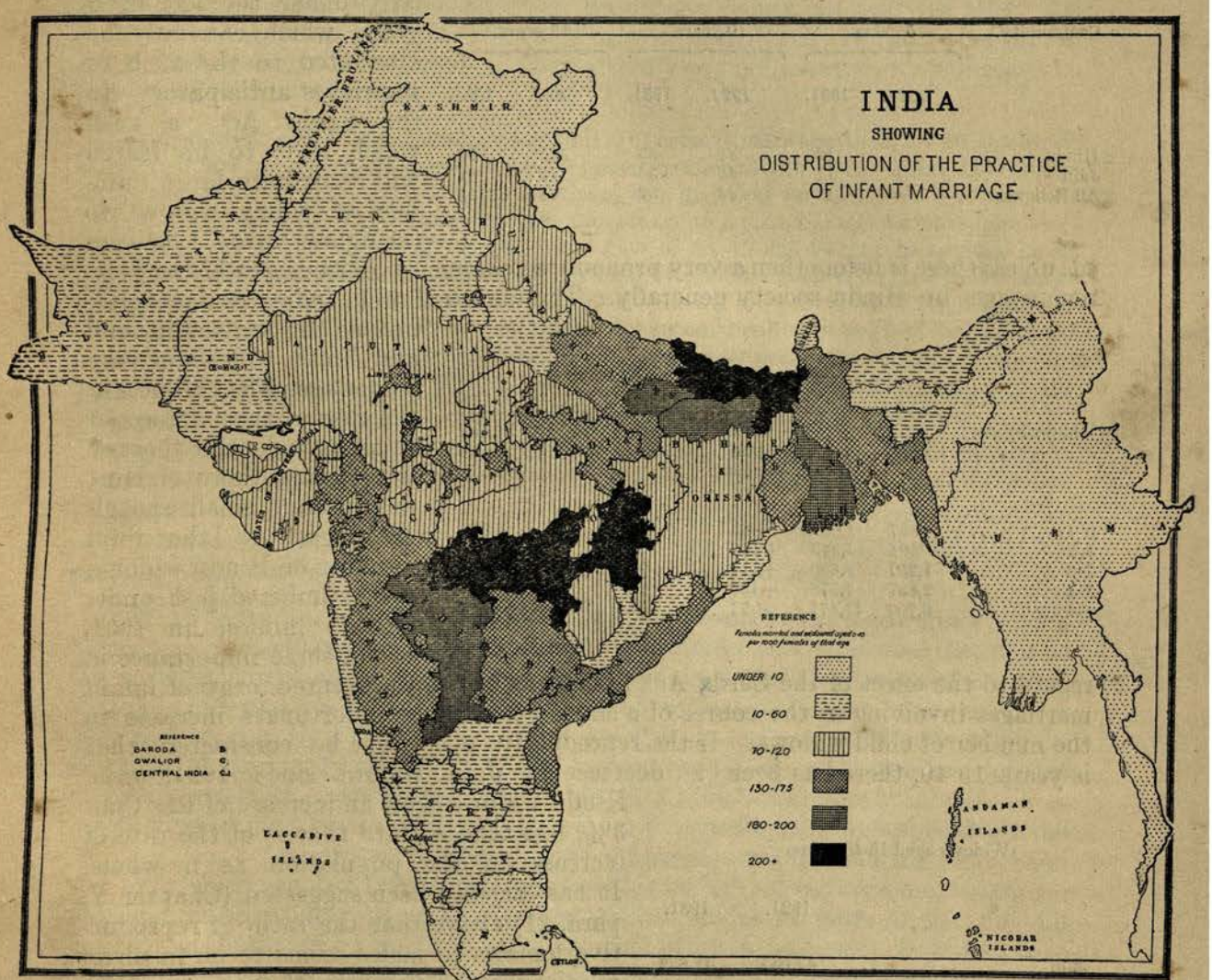
Interpretation of "Married".

sanction, there exists no necessity in the case of the Hindu marriage for any further ceremony to cement the union, which also remains valid and final in the case of the bridegroom's death, whereas completion by a subsequent ceremony would be essential to a mere betrothal. It is true that a further ceremony is frequently performed either when the wife is taken to her husband's house or as a preliminary to consummation, but such ceremonies are neither universal nor essential. The Age of Consent Committee's report has made this quite clear; thus, in section 159, "the practice of *gaona*, according to which the girl-wife is not sent to the husband's family till some time after marriage, and generally after puberty, does not prevail in Bengal, with the result that soon after marriage, at any age, the girl lives with her husband and consummation invariably follows on attainment of puberty". Again (section 54) "the custom of *gaona*.....obtains in the Punjab to a fair extent .....but is fast disappearing, and in any case the period which elapses between marriage and *gaona* is becoming shorter and shorter." Again in Assam (section 145) "*garbhadhan* is still mostly practised. It takes place soon after puberty and precedes consummation. Amongst some educated people it is falling into disuse". In the case of widowers remarrying "the ceremony is almost invariably ignored", section 41. Again, writing of India generally, section 227, "There is a growing tendency everywhere to drop this practice (*gaona, garbhadhan dwiragaman, doli, rukhsati*, etc.)..... It.....is falling into disuse more and more.....and none of the ceremonies are any protection to unions before 16." Finally in section 383 the Committee conclude that "the practice of *gaona, garbhadhana* or similar consummation ceremonies does not obtain throughout India and wherever it existed once it is fast dying out". Were the practice of *gaona* or *garbhadhana* the most important part of the marriage ceremony it is possible that a return of married might be made to coincide with one of effective marriage, but as these ceremonies are neither essential to marriage nor its invariable concomitant it is obviously quite impossible to make their completion the test of a marriage for census purposes, and marriage in these statistics can only be interpreted subject to the reservation that it is not ordinarily effective before puberty, and under the age of 15 years can probably be ignored, as far as the purely statistical consideration of the propagation of the species is concerned.

Infant Marriage.

97. To say that in one aspect marriages before the age of 15 can be ignored is not of course to suggest that child marriage is of no demographical importance. Its bearing on the population question has already been considered in the two preceding chapters. The map below shows roughly the prevalence of the custom of child marriage, for though it cannot attempt to take into account the number of married children returned at the census as unmarried, it must be recognised that infant marriage on the scale that preceded the Sarda Act at this census was of an abnormal nature and is hardly consistent with the steady improvement in the age of marriage that has taken place during the past 50 years. It is perhaps worth observing that this distribution suggests a correlation with the brachycephalic non-Armenoid Alpine element in the population of India, and it may be observed that according to Vámbéry (quoted by Westermarck, *History of Human Marriage*, 1901, page 214) "all peoples of the Turkish stock are in the habit of betrothing babies". The racial connection between Tajik and Indian brachycephalic stock is indicated in Chapter XII, and a probable connection with Russia also pointed out. It may therefore be observed here that at the end of the last century (1867-75) Russia was the only country in Europe where marriage approached the universality of marriage in India, 68·31% of persons being married, and the only country where the marriage age was anything like so young, 57·27% of married women being under the age of 20, Hungary being the next with 35·16%. Various views have been held as to the origin of the custom of child marriage. It seems never to have extended to the Malabar coast and is not nearly so prevalent in the extreme south, along the east coast, or in the north-west as in the west, in Bengal and in the Deccan. Clearly it is very ancient and the suggestion that attributes it to the Muslim invasions is not even momentarily entertainable. Megasthenes presumably refers to the practice when he records that the girls of the Pandaian kingdom bear children at the age of seven, adding that they are old at 40. Risley regards the custom as due primarily to hypergamy which, by limiting the choice of bridegrooms, impels parents to marry off their girls at the earliest age possible. Whether hypergamy has or has not contributed to the establishment of the custom, it might equally well have been due, as it almost certainly is in one

tribe in Assam, to a paucity of women and the necessity of making sure of a wife before someone else snapped her up, and not to a paucity of bridegrooms in a country where males exceed females. Gait regards infant marriage as the result of the impact of 'Aryan' and 'Dravidian', and as a device to guard against pre-marital communism, and this again is likely to have been a contributing factor (*cf. infra* Chapter XII, page 457). More weight however than was given by him seems due to the late Sir J. Campbell's opinion quoted on page 271 of the 1911 Census Report. Campbell's opinion was that early marriage was due to a belief in the danger of dying with unfulfilled wishes combined with the great wish of a Hindu to marry and have children. As stated this is probably the wrong way round. The wish to marry and have children is the cause of the fear of dying unmarried. It will be pointed out later (Chapter XI, page 379) that the penalty for failure to marry is extinction in a future existence. This belief appears in the tradition of primitive tribes from Assam to Fiji, where "not a single unmarried Fijian ghost is known to have reached the mansions of the blest", and is still so lively in some parts of India that the corpse of a person dying unmarried is married before cremation. In China this feeling is so strong that the very souls of the unmarried dead are married and given in marriage *post mortem*, and that the idea is not absent in Europe may be inferred from the belief once current in England that maids who died unwed 'lead apes in hell'. It would be rash to say that this superstition was the cause of early marriage, but it seems more than probable that the underlying idea which imputes blame to failure to marry and propagate is the same as that which enjoins fertilization at the earliest opportunity.



98. Infant marriage naturally involves infant widowhood, a feature of no significance where remarriage is allowed, but of serious importance where it is not. It has already been pointed out that there is an excess of males in India generally and that this is likely to tend, when associated with child marriage, towards an increasing disparity between the ages of husband and wife if it does not actually tend towards prepuberty marriage of the latter. Widows who can be remarried do not **Widowhood.**

complicate the position, but the existence of numbers of youthful widows who cannot must accentuate this tendency. In the case of older widows it is obvious that their numbers will affect the population question little once the reproductive ages are over, while in the case of widowers their loss to reproduction is governed only by their inability or disinclination to find wives, and at the reproductive ages their numbers at any given time are probably mainly those of males in the intermediate and temporary stage between bereavement and remarriage. In any case there is an excess of males and in consequence a solitary life is compulsory for a certain number and it makes little difference whether they are bachelors or widowers. The consideration of widowhood may therefore be confined to a consideration of its existence as a permanent bar to remarriage. It has already been pointed out that the general ratio of widowed females has decreased as compared with 1921. At that census there were 175 widows in every 1,000 females, a figure which had fallen in 1931 to 155. It is however only Jains and Hindus who place an effective ban on widow remarriage, and in both these communities the total ratio of widows has fallen; Jain widows in 1931 were 253 per 1,000 females, but in 1931 only 221. Similarly the 1921 figure of 191 widows in every 1,000 Hindu females has fallen to 169; in both these as in all other communities the decrease must be largely attributed to the absence of famine and pestilence during the past decade. Famine at any rate seems definitely selective of males. On the other hand, as already pointed out, there has already been a very remarkable increase in child widows, particularly under the age of 5 years, which can only be attributed to the rush of marriages anticipatory to the Sarda Act, a rush which it is to be feared will contribute large numbers of young widows to the figures of the 1941 census unless there is before then a very pronounced change of attitude towards widow remarriage in Hindu society generally. The marginal table indicates the variation at this census in Jain and Hindu widows of very tender age. The numbers in the case of the Jains are so small as to deprive them of significance; those of Hindus, though small enough in regard to the total number of Hindu widows, who numbered just under twenty million in 1931, are of some importance in regard to the effect of the Sarda Act in causing an unprecedented orgy of infant marriages involving in the course of a single year a most unfortunate increase in the number of child widows. If the reproductive ages alone be considered, that is years 15-40, there has been a decrease in Jain widows since 1921, while Hindu widows show an increase of less than 3%, less than a third that is of the rate of increase in the population as a whole. It has already been suggested (Chapter V, para. 81) above that the ratio of reproductive females to males seems to be in direct relationship to the rate of increase of the community, so that any considerable increase during the present decade in the number of widows who cannot remarry is likely to reduce the proportion borne by the Hindu and Jain communities to the population as a whole, if not in 1941 then certainly in 1951, so that from one point of view at least reform in the direction of widow remarriage of much more intensity than has been waged hitherto would

Community.	Widows, per 10,000 of all ages, under the age of— 5 years.		10 years.		15 years.	
	1921.	1931.	*1921.*	1931.	*1921.*	1931.
Hindu ..	*6*	12	*48*	55	*163*	129
Jain ..	*8*	11	*40*	33	*119*	81
All Religions	*6*	12	*44*	52	*148*	123

Widows aged.	Hindu. 1921.	1931.	Variation per cent.	Jain. 1921.	1931.	Variation per cent.
0-1 ..	597	1,081	+81	15	20	+33
1-2 ..	494	1,342	+172	4	8	+100
2-3 ..	1,257	2,695	+114	23	16	—30
3-4 ..	2,837	7,078	+150	26	21	—19
4-5 ..	6,707	11,471	+71	51	78	+53

Widows aged 15-40 years.	1921.	1931.
Jain	47,041	41,672
Hindu	5,817,781	5,981,096

seem to be indicated in their own interests, as well as in those of the Sarda Act widows, on the part of Hindus in general. It has already been suggested that the caste system leads to the production of an excess of males; that the excess exists is in any case incontrovertible. It seems also an unavoidable conclusion that an excess of males must tend to lower the age of marriage for females since the number of mature females will not be enough to go round. The ban on widow remarriage must accentuate the evils of this vicious circle as well as contributing very largely to excessive disparity in the ages of married couples where a widower remarries, a disparity which is apt to begin in unhappiness and conclude in sterility, for marriages of this kind are undoubtedly less fertile than those between persons of more equal ages. It is not without significance that the Census Commissioner of Baroda State records that there is a

"Growing consciousness of the fact that remarriage is becoming a social necessity in Gujarat. The 1911 Report mentioned a number of petitions from.....places in which the Government of the State was actually requested to make remarriage of widows compulsory: the disgruntled bachelors recounted their woes in these petitions owing to the fewness of virgin brides in their castes. The local Arya Samaj in recent years has attempted to popularise the idea of remarriage of widows amongst higher castes. A permissive Act for the remarriage of widows has been in existence for many years and yet very few persons amongst the higher castes have so far taken advantage of it. Census Committees report very little change in the general attitude of the higher castes. The Porwads in South Gujarat however are understood to have given a general permit to the widows to remarry".

Similarly the Census Superintendent in Rajputana points out that for every 256 potential bridegrooms in Rajputana there exist at present only 162 potential brides, and if the latter are not married till they are 15 years old many males will reach 20 years unmarried. He writes:—

"From 15-30, ages at which males contemplate or achieve marriage, there are 46 unmarried males per 1,000 persons, while there are only 4 unmarried females at similar ages. It therefore follows that these 46 males must arrange marriages with girls who are aged from 5-10 and from 10-15 of whom there are 82. Observing these proportionate figures the approximate number of girls that have reached the age of 14 is 11 while boys of 18, 19 and 20 may be assessed as 30. It looks therefore as if the discrepancy of 4 years fixed by the Sarda Act of 14 for females and 18 for males is for the present insufficient in practice and that if the provisions of the Act are rigidly complied with, the age of marriage for males will automatically rise to 21-23 for some years to come for want of sufficient girls who have reached the age of at least 14".

In short the course indicated by the census figures for Hindus is to raise the age of maternity and the ban on widow remarriage; for Muslims to relieve the rigours of purdah when combined with penury and to raise likewise the age of maternity at any rate in those parts of India where Muslims practise infant marriage. It is not suggested that Hindus and Muslims are alone concerned in these matters, but it is they who constitute the vast bulk of the population of India proper, and it is their progeny that will determine the quality of future generations.

The Child Marriage Restraint Act, 1930.

99. As a matter of fact the last three or four years of the decade under review have been particularly marked by social movements and legislation bearing on the marital condition of the people and therefore destined ultimately to affect that side of social life with the census returns for which this chapter is concerned. Dewan Bahadur Harbilas Sarda's bill to prohibit, in the case of Hindus only, the marriage of girls under the age of 12 and boys under the age of 15 was first debated in the Legislative Assembly on September 15th, 1927, and was then referred to a select committee by which it was converted to a penal measure applicable to all communities. The Act, as passed in its final form as the Child Marriage Restraint Act on 28th September 1929, provided penalties for the solemnization of marriages of male children under 18 and of female children under 14 years of age, but did not invalidate marriages made in contravention of its provisions. It was to take effect from April 1st, 1930, and it was this interval between the date when the Act was passed and the date on which it came into force which was very largely responsible for the enormous increase in the numbers of those married below the age of ten years. This period was naturally an opportunity for a campaign against the Act by those who regarded it as objectionable. The opposition of a conservative section of orthodox Hindus was natural, and the objection was of course based on religious grounds, though all Brahmans, *e.g.*, the Nambudris, do not practise prepuberty marriage and those who do not have not thereby lost

their status. Generally speaking, the Act met with wide approval among educated Hindus interested in social reform, and advantage was taken of the great Kumbh Mela at Allahabad in February just before the Act was to become operative to undertake propaganda on its behalf, though some of the orthodox resented the distribution of vernacular translations of the Act and the Sanatan Dharma Sabha organised a demonstration. In Poona a Yajurvediya Brahman *sabha* adopted resolutions making it obligatory on members of their community to refrain from divulging marriages made in contravention of the new law. Rather an unlooked for opposition to the Act came from a section of the Muslim community based apparently on the arguments that any act controlling the age of marriage must *ipso facto* be an encroachment on the authority of the Shariat, and that the Quran itself, at any rate by implication, provided for child marriages in certain cases. The possibility of prepuberty marriage certainly seems to be implied in the Book 'Divorce' where three months are prescribed as the term within which a divorce shall not become absolute in the case of wives "who have not yet had their courses". On the other hand it has been stated that consummation before puberty is forbidden by the Shariat, and in any case a female married as a minor is entitled to repudiate the marriage on attaining majority, and the position of the Muslim objectors to the Act seemed to be that no restriction was required in their case and that any legislation made a precedent for interference with their religious law. Other Muslims hold marriage to be a civil contract, and all agree that prepuberty consummation is not practised, but it seems clear that in the North-West Frontier Province, as in east Bengal and in Assam, prepuberty betrothal has the sanctity of marriage in the eyes of custom, while the actual returns of Muslim marriages at this census have suggested to at least one census superintendent that "it is also probable that through close association with their Hindu neighbours they [that is Muslims] are gradually assimilating more and more the social customs of the major community." As it was, a Muslim conference was held under the auspices of the "Committee for the Protection of Religion" and passed a resolution calling for a campaign of civil disobedience against the Act and urging Muslims to celebrate marriages in contravention of it, as if they were desirous to prove the Act unnecessary by creating new conditions in which it would be needed. Similar propaganda led to Muslim processions and a hartal in Peshawar but failed to bring about a large number of marriages before April 1st as its promoters had intended, and a somewhat artificial nature is suggested for the Muslim propaganda by the fact that in Baroda State an Infant Marriage Prevention Act had operated since 1904, without any opposition for almost a generation, although at any rate one Hindu community there had obtained exemption from the Act's provisions.

Meanwhile there took place all over India a rush to marry off minor children before the Act became effective. Gujarat and Bengal seem to have been particularly active in this respect, but other parts of India were not far behind. *Liberty* (13th March, 1930), with substantial accuracy in spite of somewhat hyperbolical wording, thus described the state of affairs in March 1930 :—

"A matrimonial wave is just passing over the country. Bride in embryo is being mated to groom in the cradle. The Sarda Act is coming into force and the pig-tailed pundits have sanctioned—rather sanctified juvenile unions to stave off perdition. Poor girl just learning to suck the feeding bottle is being carried over to the wedding bower. Urchins are being snatched from the arms of their playmates to don the garb of a groom. As an emergency measure the elastic pundits have issued an edict whereby they have certified the month of *Chaitra* to be the proper season for matrimonial alliances ..... our pundits have extended the limit this year ..... We are sure before the 1st of April come in there will hardly be left a single unmarried man or woman in India".

Two thousand child marriage contracts had been reported from Gujarat as early as the previous November, and demands for dowries were said to have become exorbitant and the businesses of money-lenders brisk. Among the Kadva Kunbis of Gujarat, however, the spate of marriage was partly attributed to the custom by which marriages are celebrated only "when the goddess speaks", an occasion which is determined in the temple of Umia Mata at Unjha by lots drawn by Brahman priests and astrologers after worship with the two headmen of that place in the Mehsana district of the Baroda State. Consequently marriage opportunities for this section of the community occur only at intervals and

possibly as rarely as once in twelve years. One such occasion occurred just before the census of 1911. The total population of Kadva Kunbis was 269,348 according to the census of 1921 and in 1931 there were 219,161 in Baroda alone. The rush of marriages in Gujarat went on in December, and 1,000 were reported to have taken place in Surat on December 12th alone, while all the towns in that district were festive with marriage processions, music and illuminations, the great majority of which marriages undoubtedly took place in anticipation of the operation of the restricting Act. Similar scenes were enacted in Bengal in the following February and March particularly in the districts of Hughli, Bankura, Dinajpur, Nadia, Dacca and Chittagong. In Bakarganj "the monthly average of minor marriages registered during 1921 to 1929 was 305. In the four months from January to April (1930), the numbers registered were respectively 419, 1,320, 8,782 and 4,452", and these figures refer of course to Muslim marriages only. In Bankura child marriages were reported to be taking place at the rate of 1000 a day on propitious days in February; in Dinajpur some 10,000 marriages were reputed to have taken place, mostly in order to anticipate the Act, between the middle of January and the middle of March; in the Chuadanga subdivision of Nadia some 4,000 marriages were reported to have involved difficulties in the engagement of musicians, palanquin-bearers, and even of motor-cars and 'buses, and to have sent up the prices of fish, curds and sweetmeats to exorbitant figures, as was the case also in Chittagong. One account from Bengal states that money-lenders and others who stood to profit by the celebration of marriages circulated a rumour that the Act prohibited any marriage's taking place for the space of 14 years. A similar rush of marriages was reported from Allahabad at the end of the auspicious season for marriages in March, as also from Manbhum in Bihar. In the Tamil districts of southern India hundreds of child marriages were likewise reported in March, and it was reported from Madura that on March 12th and 15th, days found propitious by the astrologers, 200 vakils of that town "married off their children, practically all of whom were within the ages of 6 to 10". In Bombay there was a similar rush of marriages in March; these were mostly Hindus, but in Goalpara in Assam both Hindus and Muslims celebrated a rush of marriages to an extent sufficient to run up the price of many commodities, while towards the end of March the Marriage Registration offices in the Munshiganj sub-division of Dacca in Bengal were registering 100 marriages a day among Muslims. In Sind likewise Muslims as well as Hindus hurried on marriages to forestall the Act. In Larkana town alone 300 pairs of infants were reported to have had their marriages arranged for March, while in the Larkana and Upper Sind Frontier districts the number of marriages taking place was so great that difficulty was experienced in getting the services not only of musicians, it was said, but even of priests. In many cases, of course, the children married in all this haste were the merest infants. Apart from vague descriptions of the children married as "mere babes" (Gujarat) or as "aged only a few months" (Dhanbad) many specific cases were reported of marriages in which the bridegroom and bride were respectively, to give some of the actual instances, 25 and two and a half years (Bankura), seven years and three years old (Calcutta), two years old and twenty one days (Serajganj), three years old and ten days old (Brahmanbaria), four years and three years (Sind), while in another Sind case a Muslim gentleman of position was reported to have married a yet unweaned son to a girl of 4 years, and on March 25th in another province the six-year old son of an influential Muslim nobleman was married to the four year old daughter of a very prominent judge.

Not unnaturally this rush of hasty marriages involved unforeseen consequences. Criminal cases followed marriages hurried though without the consent of parents or others in which the caste of an emergency bridegroom had been misrepresented, a deluded Kayastha in Bengal, for instance, marrying his daughter to a Napit. Other such marriages had to be stopped by injunctions, and in one case in Nasik the court interfered to prevent the marriage of a Brahman girl of 10 to a deformed cripple nearly four times her age. Her father's excuse was that the Act would shortly be in force, it was against the Shastras to keep his daughter unmarried till she was 14, and in the short time available no more suitable husband could be found. In this case a properly indignant neighbour had moved the court, but it is to be feared that many other such cases are likely to have occurred in which there was no interference. But that some sections of the public are alive to such abuses is

indicated not only by this case but by another earlier in the year, also in Bombay, in which the Youth League interfered to obtain an injunction against the second marriage of a boy of 12 who was sickly and whose first wife was alive. In this case however the marriage was carried through outside British territory, after which the boy died leaving two child widows. Of a different sort were the consequences of the pre-Sarda Act marriages in Assam, where the expenses incurred on these marriages by Muslim immigrants from Maimansingh were followed by very low prices for jute and paddy and thus materially contributed to agricultural distress and to the consequent necessity for the distribution of loans. Similarly in Bengal anxiety to forestall the Act is reputed to have led to reckless borrowing on a large scale, with "fantastic rates of interest" which are reported to have mounted as high as 78% in Bogra District. In Broach district in Bombay the President of the District Congress Committee publicly complained that the people were too engrossed in marrying to care for political meetings.

In fact marriages did not stop when the Act came into force, but were celebrated, particularly by Muslims, by way of protest and challenge. On April 4th a congregation of some 12,000 Muslims, for instance, were assembled at the Jama Masjid in Delhi to witness the marriage of a boy of 13 to a girl of 9, and the District Magistrate was then petitioned to prosecute all concerned. Similar marriages were celebrated by Muslims in Multan, and orthodox Hindus as well as Muslims continued to protest against the Act and to advocate defiance. On the other hand supporters of the Act were active in protest against any rumour of its amendment and a representation to the same effect was made to H. E. the Viceroy by an influential body of Muslim ladies, while the support given by the leading Indian Christians to the Act brought out an aspect of the situation unfamiliar to many, in that it indicated the retention of purely secular marriage among the rural Christian community on account of the fact that early marriage could not be celebrated under the Christian Marriage Act. This retention of secular marriage after conversion is familiar enough in the case of many hill tribes on account of the difficulty of obtaining divorce in the case of marriages under the Christian Marriage Act, but in their case the question of age does not lead to any difficulty as they mostly practise adult marriage. In spite of educated support, however, the agitation against the Act resulted in Mr. Surpat Singh's motion in July 1930 to amend the Act so as to permit of the marriage of persons below the specified ages on the production by such person's guardians of the certificate of a Civil Court of its satisfaction that the marriage should be permitted for family reasons or on conscientious grounds. Other amending bills have since been introduced either to repeal the Act altogether or to exempt from its operation communities in which post-puberty marriage is forbidden by their religious usages or customs, but none of them have got further than that stage. Meanwhile corresponding legislation has been passed in a number of Indian States including Kashmir and Baroda. Mysore, which had an Infant Marriage Prevention Regulation, forbidding the marriage of girls under eight years, as early as 1894, introduced a bill in 1931 making punishable marriages below the ages prescribed in the Sarda Act but providing for the reduction of the age for special reasons to 12 in the case of girls, under the orders of the District Magistrate and on condition that consummation should not take place till after the age of 14. At the time of writing this bill has not yet become law, but a law has been enacted in Jammu and Kashmir, and the pre-existing law in Baroda was at once brought into conformity with that in British India. In the Idar State the Act proposed by the State Council likewise prescribes the ages of 18 and 14 and contains the additional proviso that a man over 45 years of age shall not marry a woman of less than half his age. On the other hand the Kadva Kunbis, whose custom of observing periodic marriage occasions has already been mentioned, are to be permitted to continue to celebrate under-age marriages provided consummation is postponed. The Baroda Government on the contrary, which had an Infant Marriage Prevention Act in 1904, and which had since 1922 exempted the Kadva Kunbis from its application, withdrew that privilege in the 1930 amendment, and at the same time stiffened the Act by invalidating all marriages below the ages of 8 and 6 in the cases of boys and girls respectively, and made the parties responsible for all marriages under 16 or 14, as the case might be, punishable by imprisonment as well as by fine. As a matter of fact the Kadva Kunbis cannot be regarded as suffering very severe hardship under any child marriage restraint act,

as they can fulfil their obligation to the goddess by marrying the child to a bunch of flowers which is afterwards thrown away, when the child can be remarried by the *natra* form used for the widowed. Apart from this particular group of Kunbis, the Kunbi, Kurmi or Kurmikshattriya group generally have been somewhat conspicuous for the practice of infant marriage; this is probably an ancient characteristic, but may possibly be now-a-days a factor in their campaign of social scansion.

The instructions of the Government of India were that the provisions of the Child Marriage Restraint Act should on coming into operation be administered with due care and discretion, and the cry was raised that the Act was intended to be a dead letter. It is of course obvious from the nature of the Act that nothing will come of it if no one bothers to prosecute, a duty which has been deliberately left to the private citizen; the Census Superintendent for Bihar and Orissa quotes a number of correspondents who agree that the Act is ineffective in that province, and the Census Superintendent of Assam describes it as quite inoperative in that province, and this perhaps is the general view of the functioning of the Act in most parts of India, for the Act depends for its success on the vigorous working of public opinion. The first conviction under the Act was reported from Lahore in July 1930, and up to February 1931, when the census took place, there had been thirty-three prosecutions, at least three of which related to Muslims and one to Christians. Since then not less than a score of convictions and more injunctions have served to show that the Act *can* operate successfully *where there are public associations or private individuals prepared to deposit security and take up cases* in which the law is being transgressed. Thus the Gujarat Social Reform Association has taken action in a number of cases including two in which men of 40 or 50 were to marry girls of 6. At the same time, the warning of the Age of Consent Committee (Report, Section 291, page 133) applies here with some force. It points out that the number of such institutions " is so small and the places where they exist so few, that it will be a travesty of facts to suggest that these associations would serve the purpose of reporting even grave cases of breaches of the law. The rural areas may be altogether wiped out of the map if all hope is concentrated on the manner in which these associations will function ". In one case dealt with by the courts in Noakhali in Bengal two brothers aged 50 and 45 were punished for marrying, in defiance of the Act, their two cousins age 4 and 2. They were Muslims and the intention was to obtain final control of the property and persons of the two children whose guardians they were, a motive which would apparently put the marriage in any case into the category of those banned in the rather obscure verse at the beginning of that book of the Quran called ' The Women '. They were fined Rs. 150 each, not an excessively severe penalty, in view of the fact that they had presumably effected their object. In a case in Madras a village munsiff who transgressed the Act was dismissed by the Collector but re-instated with a warning by higher authority. It is, however, still easy enough in many places to evade the Act entirely by celebrating a marriage outside British territory, and a specific instance may be quoted of parties in Ajmer who went to Kishengarh State to celebrate a marriage illegal in British India. This however seems to indicate that the law is something more than a mere dead letter, and that the unfortunate increase in the existing numbers of infants and children married and widowed at a tender age, which has been occasioned by the advantage taken by the orthodox to marry while an open season yet remained, may ultimately be compensated for by the numbers which will benefit from the future working of the Act. There is also hope that once the practice of prepuberty marriage ceases (if it does) there will be an automatic improvement in the position of the unfortunate father of daughters who must under present conditions almost ruin himself financially in order to avoid the stigma of their growing up unmarried. In the Baroda State Council a bill has been moved to make it a punishable offence for a bridegroom or his guardians to ask for any remuneration as the price of his willingness to accept a girl as a bride, and the proposed penalty is a fine of Rs. 500 or six months simple imprisonment or both. It is doubtful if it would be possible to enforce such a law, any more than the Sarda Act can be enforced if the public do not prosecute, but it " professes the most noble sentiments ".

One point has to be borne in mind with regard to the marriage of girls and that is that an excess of males, particularly when it is almost compulsory for men to have a son, since " there is no heaven for a sonless man ", is bound to lower the age

of marriage for females. When there are not enough to go round it becomes a necessity to secure a girl while she is still young enough not to have been snapped up by some one else, and if as we have suggested elsewhere (*vide supra* para. 79) an excess of males is biologically inherent in the present caste system, a relaxation of that system will be necessary to increase the proportion of females to males and to remove the growing shortage of the former, which must, if it continue to increase, tend irresistibly in the end towards making the early marriage of girls almost compulsory.

Widow Remarriage and Divorce.

100. Restriction in infant marriage is not the only direction towards which reforming movements have been directed. Permission for Hindu widows to remarry is a natural corollary of the abandonment of the practice of *sati*, but though *sati* has gone the social ban on the remarriage of the widow remains, and in every thousand Hindu women there are still 169 widowed twenty-two of whom are under thirty years of age and over a quarter of those under 20. The widower however incurs no stigma in remarrying unless there be great disparity of age and then only among the more progressively-minded. Among the latter there is a definite and pronounced prejudice against the remarriage of middle-aged men to young girls, and the Idar State, as just pointed out, has gone so far as to prohibit the marriage of a man over 45 years old to any woman less than half his age. A similar movement is at work in the Jain community, and the Jain Swetambar Conference at Junnar in 1930 passed a resolution limiting the marriageable age of males to 45 years. The point of view which would prohibit a man's marrying when past 45 involves perhaps a tacit assumption that his marriage with a widow or a spinster of mature years is out of the question, an assumption natural enough in the present condition of Hindu and Jain society where marriageable girls of mature years are not to be found and widows may not be remarried; it would appear an unnatural point of view were the prejudice against post-puberty marriage and widow remarriage less strigently operative, though some schools of Hindu thought would probably uphold the attitude in any case. In Hyderabad State a bill to legalise the remarriage of Hindu widows on the lines of the existing law in British India, where marriages of Hindu widows were made legal by Act XV of 1856, was opposed by orthodox Hindus, but received general support from public opinion, and in one community of Reddis, who normally prohibit widow remarriage, the remarriage of a girl who had been widowed at 7 years old met with general approval and the orthodox, who succeeded in preventing a similar union by dissuading the bride, were themselves outcasted for their interference. Generally speaking, however, remarriage of Hindu widows among the higher castes is still uncommon enough to attract attention in Indian papers to its infrequent occurrences.

If remarriage is not easy for the Hindu widow, divorce is much more difficult. The husband who wishes to marry another wife can do so, but the tie between husband and any wife once married is indissoluble in Hindu law. The Madras courts have recognised divorce when allowed by caste custom, but even this practice has not been generally applied. The only case in which it seems to be definitely certain that a Hindu marriage can be nullified is in the case of one affected by the Native Christians' Marriage Act of 1866 in which one party to the marriage embraces Christianity and is in consequence deserted by the other. In 1929 however a bill to permit the Hindu community to resort to divorce in certain circumstances was introduced in the Legislative Council of the Baroda State and received the Gaekwar's assent in 1931.

On the Malabar coast, owing to the prevalence of the *marumakkathayam* system, the position of women generally has been better than in any other part of civilized India. The Nambudri Brahmans, however, follow the *makkathayam* system and the great majority of Nambudri women are condemned by ancient custom to remain unmarried, as only the eldest son in a Nambudri family marries a wife of his own caste. The others marry Nayar women with whom they live in the form of union known as *sambandham*, easily dissoluble by either party. Legislation is now in progress to enable the younger brothers of a Nambudri family to contract marriages within their own caste and also to give legal recognition and binding effect to *sambandham* marriages (as was done in Cochin State by the Nayar Regulation of 1920), whether hypergamous or endogamous, while securing to the wife the right of divorce and, with her children, the right of maintenance

by the husband, together with the right to inherit a moiety of undisposed self-acquired property left by the husband. By the customary law all responsibility for the maintenance of the children lay with the woman's family, and any property acquired by the husband reverted to his family at his death. Obviously modern conditions call for some relaxation of this customary law, for the *marumakkathayam* system, perhaps the best in the world when taken by itself, has possibly in the past been exploited by the Nambudris to their own profit. But it would be as great an error to replace the *marumakkathayam* system by the ordinary *makkathayam* one as to suppose that the former is either primitive, barbarous or in any way less respectable than the latter, although it is less widely distributed. On the contrary it seems likely that the *marumakkathayam* was the ancient and civilised system, which was replaced in most countries of southern Europe and southern Asia by the *makkathayam* under the stress of conquest by a ruder people from the steppes of southern Russia.

Inter-Caste Marriage.

101. It is not possible to leave the subject of divorce without a reference to the Indian Christian Marriage Act. The Roman Catholic Church while objecting strongly to the Indian Divorce Act as making it possible for Catholics to obtain dissolution of marriage, which is contrary to Canon Law, simultaneously objects to the fact that the laws governing Christian marriage make no provision for what is known as 'the Pauline privilege', that is for the right of the Church to dissolve a marriage contracted before conversion, a practice that would require the strictest control on the part of the state to prevent abuses, as conversion has been known to be utilized by individuals with the mere object of shaking off unwanted partners without incurring the liability to maintain them. On the other hand the Act is criticised from the opposite side for making it possible for courts to hold, as they have done, with reference to section 4 of the Act, that any marriage in which one or both the parties are Christians must be solemnized in one of the ways provided by section 5, from which it is held that no marriage can be contracted by a Christian except under the provisions of the Act, and that to perform or abet the performance of the marriage of a Christian convert according to the rites of another faith is punishable under the Act.

The difficulty of marrying into another religion without a change of creed is not one confined to Indian Christians, and until 1923 there was no law under which Hindus could contract a valid inter-caste marriage except under the Special Marriage Act of 1872, which involved a declaration that the party to the ceremony was neither a Muslim nor a Hindu. In 1910 a bill was brought to legalise marriages between persons of different castes and different religions, but it failed, and the same fate befell another bill in 1919, to legalise inter-caste marriages. In 1923 the bill referred to above was framed to legalise marriages between persons of different religions, as well as different castes, but the opposition it met with resulted in the exclusion of all communities other than Hindus, Sikhs, Jains and Buddhists. Recourse to this law, however, involves to a Hindu the loss of his personal law, and he not only loses his joint family membership, his right to manage Hindu trust property and his right of adoption, but his succession to property is governed by the Indian Succession Act. Nevertheless the Arya Marriage Validity bill brought in 1930, to provide for valid Hindu inter-caste marriages, has not become law, while Sir H. S. Gour's Special Marriage (amendment) Bill, brought forward in 1931, to provide for civil marriage between members of different communities without involving a declaration abjuring their religion, met with uncompromising opposition in the Assembly and was unhesitatingly rejected.

Devadasis.

102. In the same autumn of 1927 that the Sarda Bill was first debated in the Assembly, the Council of State discussed the motion of a Madras member for the prevention of the dedication of girls as *devadasis* in Hindu temples on the ground that such dedication inevitably entailed a life of prostitution for the girl so dedicated. The motion was opposed by the Law Member on the ground that the alleged consequences of such dedication were not inevitable and that, in so far as they might be, the case was covered by Act XVIII of 1924, which amended Sections 372 and 375 of the Indian Penal Code so as to extend their scope to cover cases of girls dedicated to Hindu temples. The motion was withdrawn on Government's undertaking that if a bill were introduced it should be circulated for opinion. In November of the same year the Madras Legislative Council passed unanimously a resolution recommending Government to undertake preventive

legislation, and on that principle the Council legislated for the enfranchisement of inamholding Devadasis, that is of dedicated women holding land in virtue of temple service. Dr. Muthulaksmi Reddi brought a bill in the Madras Council in 1930, to prohibit the performance of the dedicatory ceremony in any Hindu temple and to enable dedicated women to contract a legal marriage, and in the same year Mr. Jayakar gave notice of his intention to introduce in the Legislative Assembly a similar bill to be of general application, but the bill was not introduced. Early in 1930, the Chief of Sawantwadi raised the minimum age of dedication to 18 in that State, and in July of the same year the Maharani of Travancore abolished dedication in the temples maintained by the Government of her State. The Mysore Government had prohibited the dedication of girls in State-controlled temples as early as 1910. The question of Devadasis is introduced here because it clearly has a bearing on the census returns of marital condition. It is probable that the great majority of such women return themselves as married, regarding themselves as married to the god, and it has also to be borne in mind that a life of immorality is not necessarily the consequence of dedication. In several castes in Madras, particularly in Bellary and the neighbourhood, it is the practice, if a male heir be wanting, to dedicate a daughter in the temple. Thenceforward she becomes by established custom the heir to her parents' property and can perform their funeral rites as if she were a son. She takes to herself a mate of her own selection of any equal or higher caste, but continues to live in her father's house, and her children take his name and belong to his family and not to their father's. If she has a son he inherits the property and continues the family, while if she have a daughter only the daughter will in her turn become a *basavi* and renew the attempt. No social stigma attaches to her, but rather the contrary, for her presence at weddings is auspicious, probably because she cannot become a widow. Clearly no immorality is inherent in this custom, which is merely a method of temporarily reverting to the *marumakkathayam* system when the family lacks a male heir and the *makkathayam* system proves irksome or inadequate.

As has been already suggested, it is probable that a matrilineal system formerly obtained throughout Dravidian-speaking India, as it did in southern Europe, Asia Minor, Egypt and Mesopotamia.* The western Asiatic affinities of the *devadasi* custom of the Tamilnad, for it is perhaps only there that the custom is still general, are clear enough. Apart from the familiar account of Herodotus of the offering made by women of their chastity in the temple of Mylitta at Babylon, a reference to which custom is made also in the 43rd verse of the Epistle of Jeremy in the Book of the apocryphal Prophet Baruch, Lucian mentions the same custom at Byblus in Phoenicia; there the goddess of a temple, connected at a very early date with Egypt, was a fish from the waist downwards and had by her temple a pool of sacred fish with a stone *chattri* in its midst, and a woman had the alternative of shaving her head and offering her hair (*cf.* pp. 398, 411 *infra*) instead of her chastity. Lucian as a matter of fact puts it the other way "the women who do not chuse to be shaved are obliged in lieu of it to expose their persons, and submit to the embraces of strangers in the public market-place for hire, during the space of one whole day; the money arising from it is consecrated to the service of the goddess and expended on a sacrifice to her" (Lucian, *On the Syrian Goddess*, tr. Franklin). Hair was offered by Argive maidens to Athene before marriage, and those of Megara offered clippings of their hair at the tomb of Iphinoe; in Delos both youths and maidens offered their hair before marriage at a tomb of corn-maidens in the sanctuary of Artemis; hair was polled and offered to the goddess of health at Titane near Corinth whose image was "swathed in strips of Babylonish raiment", and it is still shorn and offered to the Holy Virgin at Tenos as a thanksgiving for recovery from sickness; at Troezen every maiden before marriage dedicated a lock of her hair, in this case to a male deity, in the temple of Hippolytus. In all these cases, with the possible exception of that of the goddess of health, the association seems to be between hair and fertility of the soil and of the body, and is probably the same association in India that makes the Abbé Dubois note on the commonness of the offering of hair in temples by men and women in fulfilment of a vow. (*People of India*, III, iii). This practice obtains now even at the *darga* of the Mirgan Sahib at Nagore in Tanjore district, where there is a tank, such as those commonly found

* For a map showing the ancient sites here mentioned see the last page of ch. XII.

at Hindu temples, to which Hindu women come to bathe who have vowed their hair to the Muslim Saint. The element of a vow seems also to have entered into the practice of sacred prostitution at Comana in Pontus, where Strabo records that people assembled on account of vows made to sacrifice to the goddess, describing the place as "full of women trafficking in their persons, the most of them sacred",* that is to the moon goddess. Similar customs were observed at the Phoenician colony of Sicca on the north African coast; at Heliopolis in Syria likewise women prostituted themselves from religious motives, and in Armenia, at the temple of Anaitis, Strabo tells us that "they dedicate male and female slaves, a fact in no way remarkable, but further the most illustrious of the people dedicate their virgin daughters, who according to custom prostitute themselves for a long period in the service of the goddess and are afterwards given in marriage". Similarly it appears that in some Indian temples it is usual for a *devadasi* to serve for a period in the temple and thereafter be kept as a concubine outside. Consecrated hetaerae were associated with the worship of Aphrodite at Corinth, and an inscription from Tralles in Lydia is referred to by Frazer which shows that the custom obtained in Asia Minor as late as the second century A. D. "It records", he says, "of a certain woman, Aurelia Aemilia by name, not only that she herself served the god in the capacity of a harlot at his express command, but that her mother and female ancestors had done the same before her". Strabo records a practice of dedicating girls in the temple of Ammon in Egypt not dissimilar to that in Armenia except that in the case of Ammon the deity was male and the dedicated girls, when given to a human husband after serving their term as the wives of the god, were mourned as dead. This practice of marriage to the god appears again, but at an earlier date, in Mesopotamia. Marduk and the Sun-god Shamash both had female votaries who were married to them and who had human children and the word used for these dedicated women was the same as the Hebrew word for a temple harlot. It is hardly necessary to point out that the *devadasi* is likewise married to the god, but may have children by men. Dedications of virility were also made in the temple of the Syrian goddess, whose priests were eunuchs who had dedicated themselves by castration, and it is possible that an Indian survival of the same cult is to be seen in the dedication of natural eunuchs or otherwise deformed males to the goddess Huligamma, and in the cult of the goddess Chatushringi, whose temple on a hill near Poona is served by men (said to be natural eunuchs) who dress in women's clothes and spend their lives begging and worshipping the goddess, at whose temple they collect in large numbers to celebrate the Dasehra. In the Deccan, besides the girls dedicated to the god Khandoba as *murli*, boys (*vāghyā*) are also dedicated and are brought up as temple servants and mendicants. This god Khandoba is worshipped at the Dasehra in association with Ekavira, who is definitely a fertility goddess worshipped during the Dasehra in Maratha house-holds in little Gardens of Adonis. In any case the general parallel between the practice in southern India and that in Syria and Asia Minor is too close to be fortuitous, and offers another link between Dravidian India and the eastern Mediterranean (*cf.* Chapters X, XI, XII). It is true that the Asian deity was more often a goddess and that in India a god is served, but there is much other evidence to indicate that in India as in Greece and Italy† and as also in Asia Minor, the mother goddess and a matrilineal system preceded a change to the patrilineal system of nordic or proto-nordic invaders. It is, of course, impossible to dissociate the custom by which all worshippers propitiate the deity once in their lives by an offering of their chastity from that of dedicating some individuals to do it for a period of their lives. Indeed the custom alluded to above of dedicating a daughter as a *basavi* for the sake of reviving the otherwise inoperative *marumakkathayam* inheritance rather suggests that the practice of dedication in one form or another, real or symbolic, may have at one time been the universal concomitant of the matrilineal system in India as in Asia Minor or in Cyprus. It is possible that the *talikettu* ceremony on the Malabar coast points in the same direction; the Brahman explanation of it as a purificatory sacrament (Iyer, *Cochin Tribes and Castes*,

* *Καὶ ἄλλοι δε κατ' εὐχὴν ἀεί τινες ἐπιδημοῦσι, θυσίας τε ἐπιτελοῦντες τῃ θεῷ ..... πλῆθος γυναικῶν ἐργαζομένων ἀπὸ του σώματος, ὧν αἱ πλείους εἰσιν ἱεραί*—Strabo, XII, 559.

†*Vide* Frazer, *The Magic Art and the Evolution of Kings*, II, ch. xviii. The institution of kingship on a matrilineal system seems to have accompanied the worship of the mother goddess.

II page 29), read with Hamilton's account of the Zamorin's nuptials (*New Account of the East Indies*, page 310), is not antagonistic. At any rate the custom of dedication prevailed as far west as Cyprus, where there was a custom, Herodotus mentions it, similar to that of Babylon, and on the African coast to Sicca Veneria and probably to Carthage herself. The Cyprian shrines were connected in form in respect of their horn and pillar cult with Crete and Mycenæ, while the cones which were the emblem of the goddess at Byblus and other places in Asia Minor have been found in the most ancient sanctuary of Cyprus and as far west as Malta. There can be no doubt but that the custom of consecrated prostitution originates in a commerce regarded as essentially necessary to ensure that life should be propagated and that the earth should fructify, and in a further reference below (Chapter XI, page 416) the significance of the participation of a stranger is suggested. According to Bernier the virgin married to Vishnu at Puri consulted the god as to the abundance of the coming harvest, an association which is most significant. Marco Polo in giving an account of the custom of prostitution to strangers in the province of Kamul tells us how it was indignantly prohibited by the Emperor of China. The order was obeyed for three years and then rescinded, as it was found that the land became barren in consequence and the earth no longer brought forth her fruit in due season.

SUBSIDIARY TABLE I.

Distribution by Civil Condition of 1,000 of each sex, religion and main age period at each of the last five censuses.

Age.	Unmarried.					Married.					Widowed.				
	1931.	1921.	1911.	1901.	1891.	1931.	1921.	1911.	1901.	1891.	1931.	1921.	1911.	1901.	1891.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
						ALL RELIGIONS.									
Males ..	479	498	490	492	487	467	438	456	454	465	54	64	54	54	48
0—5 ..	983	994	993	993	994	16	6	7	7	6	1	..	..	..	..
5—10 ..	919	966	962	962	962	79	32	37	36	36	2	2	1	2	2
10—15 ..	847	879	866	860	841	149	116	129	134	154	4	5	5	6	5
15—20 ..	553	687	665	650	621	434	298	322	334	368	13	15	13	16	11
20—30 ..	255	292	276	275	255	713	663	687	686	715	32	45	37	39	30
30—40 ..	74	83	79	87	75	859	835	857	847	868	67	82	64	66	57
40—60 ..	40	44	44	49	38	807	797	819	816	837	153	159	137	135	125
60 and over..	32	37	38	39	28	646	641	660	669	687	322	322	302	292	285
Females ..	352	358	344	344	339	493	467	483	476	485	155	175	173	180	176
0—5 ..	969	988	985	986	986	30	11	14	13	13	1	1	1	1	1
5—10 ..	802	907	891	893	874	193	88	105	102	123	5	5	4	5	3
10—15 ..	609	601	555	559	491	381	382	430	423	495	10	17	15	18	14
15—20 ..	148	188	163	179	132	818	771	800	777	833	34	41	37	44	35
20—30 ..	44	38	34	40	26	878	870	884	868	893	78	92	82	92	81
30—40 ..	17	17	16	21	13	771	769	784	765	779	212	214	200	214	208
40—60 ..	11	13	12	13	10	482	493	487	484	477	507	494	501	503	513
60 and over..	10	12	12	12	8	188	174	158	163	143	802	814	830	825	849
						HINDU.									
Males ..	462	479	470	475	472	480	452	472	466	478	58	69	58	59	50
0—5 ..	981	993	990	992	993	18	7	10	8	7	1	..	..	..	..
5—10 ..	905	956	950	952	953	93	42	48	46	45	2	2	2	2	2
10—15 ..	823	849	835	833	811	172	144	159	160	183	5	7	6	7	6
15—20 ..	523	644	626	613	587	462	339	359	369	401	15	17	15	18	12
20—30 ..	237	276	259	260	245	729	677	703	698	725	34	47	38	42	30
30—40 ..	70	81	77	87	77	859	831	856	843	865	71	88	67	70	58
40—60 ..	39	45	45	51	40	797	785	811	805	831	164	170	144	144	129
60 and over..	30	37	37	40	29	637	630	649	654	675	333	333	314	306	296
Females ..	330	332	317	321	319	501	477	495	485	495	169	191	188	194	186
0—5 ..	968	985	981	983	983	31	14	18	16	16	1	1	1	1	1
5—10 ..	779	883	863	872	850	215	111	132	122	146	6	6	5	6	4
10—15 ..	572	543	495	511	442	417	437	488	468	542	11	20	17	21	16
15—20 ..	112	138	122	141	100	850	814	836	810	862	38	48	42	49	38
20—30 ..	29	26	23	32	19	884	871	887	867	895	87	103	90	101	86
30—40 ..	12	14	13	20	12	759	755	773	751	772	229	231	214	229	216
40—60 ..	8	10	9	11	9	461	471	468	467	468	531	519	523	522	523
60 and over..	6	10	8	8	6	170	156	142	150	133	824	834	850	842	861

SUBSIDIARY TABLE I—*contd.*

Distribution by Civil Condition of 1,000 of each sex, religion and main age period at each of the last five censuses—*contd.*

Age.	Unmarried.					Married.					Widowed.				
	1931.	1921.	1911.	1901.	1891.	1931.	1921.	1911.	1901.	1891.	1931.	1921.	1911.	1901.	1891.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
MUSLIM.															
Males ..	500	531	527	526	519	456	418	427	432	440	44	51	46	42	41
0—5 ..	985	997	998	997	997	15	3	2	3	3	..	..	..	..	..
5—10 ..	932	985	984	982	983	67	14	15	17	16	1	1	1	1	1
10—15 ..	872	931	922	914	904	125	66	75	83	93	3	3	3	3	3
15—20 ..	567	749	727	714	674	421	241	263	276	316	12	10	10	10	10
20—30 ..	257	305	295	290	257	712	656	671	679	714	31	39	34	31	29
30—40 ..	64	73	72	77	62	877	858	869	870	886	59	69	59	53	52
40—60 ..	28	34	34	38	28	845	836	848	856	862	127	130	118	106	110
60 and over	22	28	28	29	20	686	681	697	717	731	292	291	275	254	249
Females ..	368	390	379	376	365	503	465	473	471	475	129	145	148	153	160
0—5 ..	964	993	995	992	992	35	6	5	7	7	1	1	..	1	1
5—10 ..	798	947	932	927	914	198	50	65	70	83	4	3	3	3	3
10—15 ..	598	644	596	597	514	394	344	393	391	474	8	12	11	12	12
15—20 ..	129	153	137	161	104	845	815	834	808	867	26	32	29	31	29
20—30 ..	35	30	27	33	20	904	901	909	898	911	61	69	64	69	69
30—40 ..	14	14	14	17	11	797	799	806	801	786	189	187	180	182	203
40—60 ..	10	11	10	12	9	495	513	505	505	462	495	476	485	483	529
60 and over	8	11	10	10	8	202	194	170	175	142	790	795	820	815	850
CHRISTIAN.															
Males ..	565	565	563	574	570	399	393	401	391	399	36	42	36	35	31
0—5 ..	996	998	998	998	997	4	2	2	2	2	..	..	..	..	1
5—10 ..	986	993	993	994	994	13	7	6	5	5	1	..	1	1	1
10—15 ..	968	973	970	972	979	31	26	29	26	20	1	1	1	2	1
15—20 ..	761	862	829	841	840	233	133	166	155	157	6	5	5	4	3
20—30 ..	393	428	445	465	490	589	548	539	518	500	18	24	16	17	10
30—40 ..	86	92	99	105	104	871	856	862	853	865	43	52	39	42	31
40—60 ..	33	40	38	39	40	861	848	862	861	870	106	112	100	100	90
60 and over	24	33	27	26	26	697	686	704	707	712	279	281	269	267	262
Females ..	474	474	460	465	456	417	413	422	409	420	109	113	118	126	124
0—5 ..	995	997	996	997	997	5	3	4	3	3	..	..	..	..	..
5—10 ..	970	984	984	984	987	29	15	15	15	12	1	1	1	1	1
10—15 ..	888	912	884	885	882	110	85	113	108	116	2	3	3	7	2
15—20 ..	391	477	418	428	398	594	510	570	554	591	15	13	12	18	11
20—30 ..	125	109	99	92	89	828	841	854	855	866	47	50	47	53	45
30—40 ..	39	49	42	38	40	816	815	821	809	817	145	136	137	153	143
40—60 ..	27	41	29	26	31	582	590	571	546	545	391	369	400	428	424
60 and over	23	43	23	22	25	250	243	205	174	180	727	714	772	804	795

SUBSIDIARY TABLE I—*concld.*

Distribution by Civil Condition of 1,000 of each sex, religion and main age period at each of the last five censuses—*concld.*

Age.	Unmarried.					Married.					Widowed.				
	1931.	1921.	1911.	1901.	1891.	1931.	1921.	1911.	1901.	1891.	1931.	1921.	1911.	1901.	1891.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
						TRIBAL.									
Males ..	516	541	539	537	552	446	411	427	413	414	38	48	34	50	34
0—5 ..	984	996	996	995	996	16	4	4	5	4	..	..	..	..	..
5—10 ..	953	986	990	980	990	46	13	10	19	9	1	1	..	1	1
10—15 ..	894	937	944	917	934	104	60	55	78	64	2	3	1	5	2
15—20 ..	567	753	743	719	710	420	236	249	261	281	13	11	8	20	9
20—30 ..	225	299	279	294	276	744	656	691	653	697	31	45	30	53	27
30—40 ..	59	72	66	71	61	887	851	888	852	891	54	77	46	77	48
40—60 ..	28	34	28	31	21	860	847	883	837	889	112	119	89	132	90
60 and over	23	26	25	24	13	737	727	754	741	772	240	247	221	235	215
Females ..	438	459	450	442	467	452	418	436	419	422	110	123	114	139	111
0—5 ..	980	995	995	992	995	19	5	4	7	5	1	..	1	1	..
5—10 ..	910	972	976	968	976	87	26	22	29	22	3	2	2	3	2
10—15 ..	761	820	816	805	805	232	172	179	183	189	7	8	5	12	6
15—20 ..	263	424	376	389	367	711	548	602	567	611	26	28	22	44	22
20—30 ..	83	99	77	91	77	862	836	873	818	872	55	65	50	91	51
30—40 ..	28	35	28	30	24	826	813	848	784	853	146	152	124	186	123
40—60 ..	19	23	18	21	16	577	588	588	544	621	404	389	394	435	363
60 and over	19	20	17	18	12	268	255	226	245	241	713	725	757	737	747
						BURMA.									
Males ..	561	559	569	565	558	392	389	389	393	394	47	52	42	42	48
0—5 ..	1,000	1,000	1,000	1,000	1,000	..	..	..	..	..	..	..	..	..	..
5—10 ..	999	1,000	1,000	1,000	1,000	1	..	..	..	..	..	..	..	..	..
10—15 ..	994	999	999	995	999	6	1	1	5	1	..	..	..	..	..
15—20 ..	807	927	919	922	932	184	69	78	75	63	9	4	3	3	5
20—40 ..	309	302	298	298	268	652	651	665	666	686	39	47	37	36	46
40—60 ..	85	72	89	88	49	797	809	817	814	843	118	119	94	98	108
60 and over	78	63	89	83	41	633	645	656	652	679	289	292	255	265	280
Females ..	521	509	519	510	506	374	377	376	381	378	105	114	105	109	116
0—5 ..	1,000	1,000	1,000	1,000	1,000	..	..	..	..	..	..	..	..	..	..
5—10 ..	999	1,000	1,000	1,000	1,000	1	..	..	..	..	..	..	..	..	..
10—15 ..	977	996	993	987	995	21	4	7	13	5	2	..	..	..	..
15—20 ..	608	733	726	720	732	366	248	259	265	246	26	19	15	15	22
20—40 ..	213	165	160	160	130	710	750	763	764	780	77	85	77	76	90
40—60 ..	70	52	70	68	35	633	661	665	653	686	297	287	265	279	279
60 and over	64	52	91	83	48	302	287	289	282	392	634	661	620	635	560

NOTE.—Owing to the sort for Civil Condition's having been confined to Race in Burma, the 1931 figures under the various religions refer only to India proper except in the case of the figures for All Religions which are inclusive of Burma.

SUBSIDIARY TABLE II.

Distribution by Civil Condition of 1,000 of each sex at certain ages as returned by each Province, State or Agency.

ALL RELIGIONS.

	Males.																		Females.																	
	All Ages.			0—5			5—10			10—15			15—40			40 and over			All Ages.			0—5			5—10			10—15			15—40			40 and over.		
	Unmarried.	Married.	Widowed.	Unmarried.	Married.	Widowed.	Unmarried.	Married.	Widowed.	Unmarried.	Married.	Widowed.	Unmarried.	Married.	Widowed.	Unmarried.	Married.	Widowed.	Unmarried.	Married.	Widowed.	Unmarried.	Married.	Widowed.	Unmarried.	Married.	Widowed.	Unmarried.	Married.	Widowed.	Unmarried.	Married.	Widowed.	Unmarried.	Married.	Widowed.
INDIA ..	479	467	54	983	16	1	919	79	2	847	149	4	257	703	40	38	774	188	352	493	155	969	30	1	802	193	5	609	381	10	59	829	112	11	415	574
Ajmer-Merwara ..	450	482	68	974	25	1	890	106	4	797	196	7	236	716	48	52	717	231	317	527	156	951	48	1	761	235	4	538	455	7	25	884	91	4	395	601
Assam	536	420	44	999	1	..	982	17	1	953	45	2	313	645	42	21	829	150	415	444	141	993	7	..	900	98	2	715	277	8	69	812	119	8	392	600
Bengal	469	498	33	981	19	..	931	68	1	867	131	2	217	757	26	14	864	122	310	514	176	952	47	1	702	291	7	450	534	16	21	824	155	4	320	676
Bihar and Orissa ..	420	529	51	968	31	1	833	163	4	718	275	7	169	789	42	23	805	172	312	527	161	948	50	2	719	273	8	519	467	14	37	847	116	6	429	565
Bombay (*including Aden*).	474	473	53	983	16	1	932	66	2	864	132	4	246	716	38	30	778	192	339	506	155	967	32	1	776	219	5	569	421	10	45	847	108	11	397	592
Burma	561	392	47	994	6	..	807	184	9	309	652	39	85	797	118	78	633	289	521	374	105	977	21	2	608	366	26	213	710	77	70	633	297	64	302	634
Central Provinces and Berar.	413	540	47	973	26	1	854	143	3	730	266	4	145	817	38	27	886	87	305	549	146	950	49	1	693	301	6	469	521	10	22	817	161	6	439	555
Coorg	554	393	53	999	1	..	996	4	..	993	7	..	457	501	42	33	791	176	444	396	160	998	2	..	990	9	1	942	55	3	150	725	125	9	361	630
Delhi	459	465	76	999	1	..	951	47	2	864	131	5	275	663	62	55	687	258	376	517	107	997	3	..	892	107	1	671	326	3	54	881	65	8	485	507
Madras	527	433	40	997	3	..	982	18	..	958	41	1	335	640	25	25	829	146	377	445	178	988	12	..	906	92	2	769	224	7	76	792	132	9	373	618
North-West Frontier Province.	574	379	47	1,000	..	..	995	5	..	975	23	2	398	562	40	49	778	173	458	433	109	1,000	..	...	982	18	..	876	121	3	119	805	76	28	502	470
Punjab (*including Agency*).	541	383	76	998	2	..	973	26	1	926	72	2	353	593	54	73	662	265	419	464	117	995	5	..	917	82	1	762	235	3	87	846	67	12	502	486
United Provinces of Agra and Oudh.	438	483	79	976	23	1	861	136	3	746	247	7	214	723	63	58	682	260	317	532	151	970	29	1	756	239	5	516	475	9	31	875	94	7	435	558
Baroda State ..	454	479	67	996	4	..	916	79	5	810	182	8	217	739	44	40	730	230	329	524	147	989	10	1	798	197	5	580	412	8	36	881	83	2	451	547
Central India Agency	444	495	61	981	18	1	895	102	3	780	214	6	193	756	51	40	747	213	331	513	156	970	29	1	771	223	6	529	460	11	39	849	112	12	392	596
Cochin State ..	587	379	34	1,000	..	..	1,000	..	..	997	3	..	407	570	23	21	847	132	467	387	146	1,000	..	..	993	7	..	930	67	3	170	728	102	12	440	548
Gwalior State ..	468	456	76	988	11	1	930	66	4	822	169	9	230	706	64	256	676	68	328	502	170	974	22	4	784	206	10	529	453	18	34	838	128	13	364	623
Hyderabad State ..	424	526	50	953	45	2	858	138	4	745	248	7	189	775	36	37	796	167	311	533	156	925	71	4	659	328	13	414	565	21	46	836	118	22	425	553
Jammu and Kashmir State.	534	412	54	1,000	..	..	982	18	..	948	51	1	309	643	48	40	748	212	404	489	107	1,000	..	..	957	42	1	777	217	6	44	920	36	6	495	499
Mysore State ..	556	393	51	1,000	..	..	999	1	..	995	5	..	394	576	30	21	787	192	404	418	177	1,000	..	..	951	48	1	804	192	4	60	796	144	10	341	649
Rajputana Agency	491	438	71	990	10	..	938	60	2	852	144	4	255	696	49	60	684	256	348	496	156	981	18	1	824	173	3	592	401	7	30	867	103	4	411	585
Travancore State ..	584	387	29	1,000	..	..	999	1	..	991	9	..	397	585	18	29	857	114	475	406	119	1,000	..	..	992	8	..	920	78	2	151	774	75	13	495	492
Western India States Agency.	470	469	61	959	40	1	888	110	2	809	187	4	227	730	43	30	744	226	357	496	147	948	51	1	824	173	3	647	348	5	41	866	93	3	436	561

SUBSIDIARY TABLE II—*contd.*

Distribution by Civil Condition of 1,000 of each sex at certain ages as returned by each Province, State or Agency—*contd.*

HINDU.*

	Males.																		Females.																	
	All Ages.			0—5.			5—10.			10—15.			15—40.			40 and over.			All Ages.			0—5.			5—10.			10—15.			15—40.			40 and over.		
	Unmarried.	Married.	Widowed.	Unmarried.	Married.	Widowed.	Unmarried.	Married.	Widowed.	Unmarried.	Married.	Widowed.	Unmarried.	Married.	Widowed.	Unmarried.	Married.	Widowed.	Unmarried.	Married.	Widowed.	Unmarried.	Married.	Widowed.	Unmarried.	Married.	Widowed.	Unmarried.	Married.	Widowed.	Unmarried.	Married.	Widowed.	Unmarried.	Married.	Widowed.
INDIA ..	**463**	**480**	**57**	**981**	**18**	**1**	**905**	**93**	**2**	**823**	**172**	**5**	**240**	**717**	**43**	**37**	**765**	**198**	**330**	**501**	**169**	**968**	**31**	**1**	**779**	**215**	**6**	**572**	**417**	**11**	**41**	**835**	**124**	**7**	**396**	**597**
Ajmer-Merwara ..	434	500	66	972	27	1	875	120	5	772	220	8	204	750	46	44	725	231	306	537	157	945	54	1	733	263	4	505	488	7	19	890	91	2	391	607
Assam	535	410	55	1,000	..	..	990	9	1	971	27	2	340	611	49	26	794	180	413	431	156	999	1	..	932	66	2	764	228	8	67	799	134	6	376	618
Bengal	469	486	45	984	16	..	955	44	1	909	90	1	262	707	31	21	816	163	293	481	226	972	26	2	731	260	9	473	505	22	22	768	210	4	290	706
Bihar and Orissa ..	412	535	53	968	31	1	826	170	4	708	285	7	167	790	43	23	799	178	302	531	167	949	49	2	710	281	9	504	481	15	31	849	120	4	423	573
Bombay (*including Aden*).	460	488	52	982	17	1	925	73	2	849	147	4	214	750	36	24	784	192	326	513	161	963	36	1	745	250	5	528	461	11	35	851	114	10	386	604
Central Provinces and Berar.	397	553	50	971	28	1	835	162	3	700	295	5	128	833	39	22	816	162	290	560	150	943	55	2	655	339	6	424	566	10	20	890	90	5	437	558
Coorg	557	387	56	999	1	..	996	4	..	993	7	..	451	504	45	33	781	186	450	391	159	998	2	..	990	9	1	948	50	2	155	720	125	9	360	631
Delhi	440	475	85	999	1	..	942	57	1	840	155	5	244	689	67	59	647	294	355	530	115	997	3	..	871	128	1	624	373	3	39	888	73	5	461	534
Madras	521	438	41	997	3	..	980	20	..	955	44	1	330	645	25	25	826	149	370	448	182	986	14	..	896	101	3	756	237	7	72	793	135	8	369	623
North-West Frontier Province.	506	440	54	1,000	..	..	990	9	1	968	30	2	373	585	42	77	716	207	435	436	129	1,000	..	..	963	35	2	817	179	4	80	825	95	19	405	576
Punjab (*including Agency*).	514	401	85	997	3	..	961	38	1	895	102	3	324	616	60	88	625	287	379	479	142	994	6	..	879	119	2	682	313	5	53	855	92	8	435	557
United Provinces of Agra and Oudh.	435	485	80	976	24	..	857	140	3	738	255	7	211	725	64	62	675	263	311	533	156	971	28	1	751	244	5	504	487	9	26	875	99	6	427	567
Baroda State ..	447	486	67	996	4	..	909	86	5	795	197	8	203	752	45	40	730	230	321	533	146	988	11	1	781	215	4	551	441	8	28	890	82	2	453	545
Central India Agency	438	500	62	980	19	1	889	108	3	766	227	7	187	761	52	41	742	217	323	518	159	967	31	2	754	240	6	506	481	13	37	847	116	12	388	600
Cochin State ..	583	381	36	1,000	..	..	1,000	..	..	997	3	..	408	565	27	22	846	132	450	387	163	1,000	..	..	991	9	..	920	76	4	161	721	118	9	415	576
Gwalior State ..	468	457	75	988	11	1	928	68	4	818	173	9	227	708	65	69	674	257	325	504	171	974	23	3	778	212	10	521	461	18	31	839	130	12	362	626
Hyderabad State ..	414	532	54	952	46	2	848	147	5	725	267	8	181	780	39	39	784	177	295	539	166	916	79	5	614	370	16	369	606	25	40	832	128	21	409	570
Jammu and Kashmir State.	527	397	76	1,000	..	..	969	30	1	939	59	2	382	567	51	88	673	239	355	461	184	1,000	..	..	927	69	4	708	280	12	39	847	128	2	364	634
Mysore State ..	554	394	52	1,000	..	..	999	1	..	994	6	..	390	579	31	21	782	197	400	419	181	1,000	..	..	948	51	1	799	197	4	57	795	148	9	337	654
Rajputana Agency ..	488	441	71	991	9	..	936	62	2	846	150	4	250	701	49	62	679	259	341	500	159	981	18	1	813	184	3	572	420	8	26	869	105	3	407	590
Travancore State ..	590	381	29	1,000	..	..	999	1	..	994	6	..	424	556	20	37	853	110	467	399	134	1,000	..	..	993	7	..	925	73	2	155	759	86	13	461	526
Western India States Agency.	455	483	62	955	44	1	871	127	2	782	214	4	206	750	44	26	746	228	348	511	141	939	60	1	794	203	3	606	388	6	34	879	87	3	446	551

SUBSIDIARY TABLE II—*concld.*

Distribution by Civil Condition of 1,000 of each sex at certain ages as returned by each Province, State or Agency—*concld.*

	Males.																		Females.														
	All Ages.			0—5			5—10			10—15			15—40			40 and over.			All Ages.			0—5			5—10			10—15			15—40			40 and over.		
	Unmarried.	Married.	Widowed.	Unmarried.	Married.	Widowed.	Unmarried.	Married.	Widowed.	Unmarried.	Married.	Widowed.	Unmarried.	Married.	Widowed.	Unmarried.	Married.	Widowed.	Unmarried.	Married.	Widowed.	Unmarried.	Married.	Widowed.	Unmarried.	Married.	Widowed.	Unmarried.	Married.	Widowed.	Unmarried.	Married.	Widowed.	Unmarried.	Married.	Widowed.
	MUSLIMS.*																																
INDIA ..	499	457	44	985	15	..	932	67	1	872	125	3	259	705	36	27	811	162	368	533	129	964	35	1	798	198	4	598	394	8	51	857	92	9	430	561
Ajmer-Merwara ..	495	437	68	977	22	1	933	65	2	869	126	5	306	635	59	61	725	214	355	512	133	968	31	1	838	158	4	615	379	6	31	894	75	5	435	560
Assam	526	449	25	998	2	..	963	36	1	913	85	2	248	725	27	9	903	88	382	491	127	982	18	..	809	188	3	548	442	10	16	908	76	4	326	670
Bengal	468	510	22	978	22	..	913	86	1	835	163	2	175	804	21	7	911	82	318	542	140	937	62	1	674	320	6	421	567	12	16	871	113	3	343	654
Bihar and Orissa ..	412	547	41	956	43	1	807	189	4	683	311	6	138	827	35	12	848	140	296	555	149	920	78	2	658	335	7	443	545	12	23	867	110	5	435	560
Bombay (*including Aden*).	521	422	57	989	11	..	959	40	1	917	80	3	340	612	48	46	754	200	384	483	133	983	16	1	900	98	2	732	263	5	65	848	87	11	441	548
Central Provinces and Berar.	492	458	50	985	14	1	960	39	1	923	75	2	273	689	38	22	813	165	386	472	142	982	17	1	894	103	3	698	296	6	47	866	87	9	399	592
Coorg	528	442	30	1,000	..	..	997	3	..	995	5	..	487	488	25	26	887	87	379	455	166	997	3	..	977	23	..	861	129	10	79	793	128	4	347	649
Delhi	488	449	63	998	2	..	970	29	1	911	86	3	316	630	54	44	755	201	411	497	92	998	2	..	927	72	1	749	248	3	64	886	50	7	523	470
Madras	583	389	28	999	1	..	996	4	..	990	10	..	394	585	21	21	871	108	426	415	159	999	1	..	970	29	1	845	150	5	94	783	123	9	372	619
North-West Frontier Province.	579	374	47	1,000	..	..	995	5	..	975	23	2	392	568	40	47	783	170	430	432	108	1,000	..	..	983	16	1	881	116	3	121	803	76	28	508	464
Punjab (*including Agency*).	554	378	68	998	2	..	980	19	1	944	54	2	362	588	50	52	702	246	443	452	105	996	4	..	934	65	1	803	194	3	106	837	57	16	527	457
United Provinces of Agra and Oudh.	451	476	73	976	23	1	880	117	3	792	203	5	219	721	60	32	727	241	349	528	123	964	35	1	778	218	4	573	421	6	55	878	67	14	481	505
Baroda State ..	497	439	64	997	3	..	962	36	2	913	84	3	294	662	44	38	744	218	368	475	157	987	5	8	903	86	11	760	236	4	67	847	86	4	426	570
Central India Agency	467	471	62	989	10	1	932	66	2	871	125	4	254	694	52	25	775	200	363	491	146	981	18	1	863	133	4	659	334	7	46	868	86	12	395	592
Cochin State ..	598	377	25	1,000	..	..	999	1	..	996	4	..	416	563	21	13	889	98	470	398	132	1,000	..	..	991	9	..	913	83	4	130	761	109	5	430	565
Gwalior State ..	471	458	71	986	12	2	950	46	4	877	115	8	250	684	59	40	736	224	363	491	146	969	25	6	841	150	9	622	364	14	62	842	96	24	411	565
Hyderabad State ..	468	493	39	975	24	1	879	118	3	829	168	3	283	690	27	40	828	132	360	496	144	955	42	3	848	151	7	634	354	12	66	835	99	22	439	539
Jammu and Kashmir State.	530	416	54	1,000	..	..	985	15	..	949	50	1	289	664	47	22	775	203	415	497	88	1,000	..	..	963	36	1	792	205	3	58	895	47	5	538	457
Mysore State ..	584	385	32	1,000	..	..	999	1	..	996	4	..	429	551	20	16	856	128	456	417	127	1,000	..	..	981	18	1	852	146	2	69	841	90	6	397	597
Rajputana Agency ..	496	436	68	988	11	1	939	59	2	877	119	4	270	679	51	31	729	240	381	493	126	979	20	1	861	136	3	674	320	6	51	872	77	6	467	527
Travancore State ..	612	367	21	1,000	..	..	998	2	..	994	6	..	436	548	16	13	898	89	485	402	113	1,000	..	..	993	7	..	920	77	3	127	790	83	7	482	511
Western India States Agency.	532	413	55	969	30	1	958	41	1	928	70	2	311	649	40	39	759	202	401	449	150	988	11	1	944	55	1	811	186	3	72	838	90	4	427	569

NOTE.—The above proportions for Provinces are calculated inclusively of the population of the Indian States attached to them, except in the case of Madras where Cochin and Travancore are excluded.

* Excludes figures for Burma as the sort for Civil Condition in that province was by Race instead of by Religion.

SUBSIDIARY TABLE III.

Distribution by main age periods and Civil Condition of 10,000 of each Sex and Religion.

Religion and age.	Males.			Females.		
	Unmarried.	Married.	Widowed.	Unmarried.	Married.	Widowed.
All Religions	4,791	4,673	536	3,521	4,931	1,548
0—5	9,833	162	5	9,692	297	11
5—10	9,189	792	19	8,017	1,935	48
10—15	8,472	1,492	36	6,089	3,814	97
15—20	5,527	4,337	136	1,485	8,180	335
20—40	1,739	7,782	479	328	8,327	1,345
40—60	397	8,067	1,536	113	4,816	5,071
60 and over ..	319	6,464	3,217	100	1,877	8,023
Hindus	4,625	4,802	573	3,298	5,012	1,690
0—5	9,812	182	6	9,676	311	13
5—10	9,053	924	23	7,792	2,150	58
10—15	8,233	1,723	44	5,719	4,168	113
15—20	5,230	4,623	147	1,116	8,505	379
20—40	1,615	7,882	503	213	8,307	1,480
40—60	385	7,974	1,641	75	4,613	5,312
60 and over ..	301	6,368	3,331	60	1,700	8,240
Muslims	4,994	4,564	442	3,676	5,033	1,291
0—5	9,844	152	4	9,640	350	10
5—10	9,322	666	12	7,984	1,978	38
10—15	8,722	1,253	25	5,985	3,937	78
15—20	5,674	4,207	119	1,292	8,453	255
20—40	1,722	7,845	433	267	8,612	1,121
40—60	283	8,449	1,268	98	4,946	4,956
60 and over ..	220	6,860	2,920	81	2,024	7,895
Christians	5,651	3,992	357	4,740	4,171	1,089
0—5	9,963	35	2	9,951	46	3
5—10	9,860	135	5	9,697	293	10
10—15	9,679	312	9	8,881	1,097	22
15—20	7,611	2,332	57	3,915	5,934	151
20—40	2,606	7,107	287	899	8,230	871
40—60	335	8,606	1,059	271	5,816	3,913
60 and over ..	235	6,973	2,792	228	2,498	7,274
Sikhs	5,503	3,696	801	4,137	4,726	1,137
0—5	9,985	14	1	9,969	29	2
5—10	9,805	187	8	9,378	613	9
10—15	9,353	627	20	7,914	2,064	22
15—20	6,546	3,324	130	2,393	7,501	106
20—40	3,026	6,381	593	360	8,998	642
40—60	1,258	6,589	2,153	101	6,400	3,499
60 and over ..	874	4,847	4,279	72	2,683	7,245
Tribals	5,158	4,466	376	4,378	4,520	1,102
0—5	9,836	160	4	9,796	196	8
5—10	9,528	462	10	9,098	873	29
10—15	8,940	1,037	23	7,611	2,323	66
15—20	5,665	4,200	135	2,629	7,111	260
20—40	1,499	8,089	412	599	8,464	937
40—60	284	8,597	1,119	190	5,773	4,037
60 and over ..	231	7,368	2,401	187	2,678	7,135

NOTE.—The figures for All Religions relate to India General but the details for the respective religions refer exclusively to India Proper, *i.e.*, excluding Burma where the sort for Civil Condition was by Race and not Religion.

SUBSIDIARY TABLE IV.

Proportion of Sexes by Civil Condition in the main Provinces.

Province and Religion.	Number of females per 1,000 males. All ages. Unmarried.	Married.	Widowed.
1	2	3	4
INDIA*	**691**	**993**	**2,717**
Hindu	679	995	2,810
Sikh	589	1,003	1,112
Muslim	665	997	2,637
Christian	799	995	2,903
Tribal	857	1,022	2,954
Assam	**705**	**961**	**2,883**
Hindu	689	936	2,535
Muslim	654	988	4,599
Tribal	889	1,010	2,463
Bengal	**610**	**953**	**4,996**
Hindu	568	899	4,518
Muslim	636	994	5,900
Buddhist	789	1,010	2,886
Bihar and Orissa	**748**	**1,004**	**3,200**
Hindu	735	999	3,155
Muslim	731	1,032	3,746
Tribal	889	1,024	3,095
Bombay (*including Aden*)	**650**	**970**	**2,671**
Hindu	664	984	2,902
Muslim	596	924	1,862
Jain	575	885	2,383
Burma	**890**	**913**	**2,142**
Burmese	967	1,005	2,386
Central Provinces and Berar	**741**	**1,015**	**3,073**
Hindu	730	1,014	3,081
Muslim	706	933	2,704
Tribal	826	1,058	3,207
Madras	**735**	**1,051**	**4,563**
Hindu	729	1,049	4,531
Muslim	750	1,096	5,827
Christian	826	1,035	3,902
Punjab	**644**	**1,005**	**1,285**
Hindu	615	998	1,401
Muslim	672	1,004	1,280
Sikh	592	1,026	1,111
United Provinces	**654**	**995**	**1,734**
Hindu	646	995	1,771
Muslim	696	997	1,521
Christian	658	1,006	1,380

*The figures against this entry refer to India General, *i.e.*, including Burma, though the details against the respective religions relate to India Proper only.

NOTE.—The Provincial figures are inclusive of the States attached to them, except Madras which excludes Cochin and Travancore.

SUBSIDIARY TABLE V.

Proportion who are married and widowed at certain ages.

Province, State or Agency.	Number per 1,000 aged 0—10 who are married.										Number per 1,000 aged 15—40 who are widowed.									
	Males.					Females.					Males.					Females.				
	1931.	1921.	1911.	1901.	1891.	1931.	1921.	1911.	1901.	1891.	1931.	1921.	1911.	1901.	1891.	1931.	1921.	1911.	1901.	1891.
HINDU.																				
INDIA	53	26	29	28	28	113	66	74	70	70	43	56	44	47	36	124	138	124	137	123
Ajmer-Merwara	70	29	18	25	30	143	74	45	67	73	46	82	63	80	34	91	126	99	135	71
Assam	4	2	2	3	2	29	11	14	18	16	49	58	54	54	40	134	155	158	181	168
Bengal	30	6	7	6	5	130	49	64	75	89	31	36	31	31	33	210	232	224	240	257
Bihar and Orissa	99	59	77	80	67	155	100	132	138	122	43	57	49	41	41	120	138	125	120	114
Bombay†	44	30	35	25	31	133	98	109	83	113	36	59	40	63	33	114	136	117	148	96
Burma	9	1	3	3	..	11	1	8	3	..	24	34	25	26	23	48	49	43	56	61
Central Provinces and Berar ..	89	34	29	28	27	179	99	99	84	95	39	59	39	61	38	89	104	78	125	80
Coorg	3	3	1	4	4	5	5	2	3	7	45	39	32	46	32	126	132	132	149	134
Madras	11	7	6	5	6	54	28	31	27	36	25	27	21	24	18	135	131	120	131	128
North-West Frontier Province ..	4	2	2			15	5	5			42	45	54			95	98	108		
Delhi	*27	12	12	9	17	*56	30	32	29	48	*67	94	72	50	59	*73	78	106	88	127
Punjab (*including Agency*) ..	*20	13				*56	36				*60	77				*92	98			
United Provinces	78	33	30	32	25	121	60	59	61	53	64	79	64	51	48	99	111	104	102	92
Baroda State	42	34	80	66	85	102	72	144	108	173	44	78	66	107	37	82	105	112	182	80
Central India Agency	62	38	47	49	..	124	88	77	86	..	52	76	54	82	..	116	131	119	160	..
Gwalior State	38	36				108	78				65	94				130	150			
Cochin State	..	..	..	..	1	4	1	1	1	12	27	34	29	26	12	118	124	122	110	55
Hyderabad State	89	32	25	26	21	189	134	127	107	126	38	54	26	42	27	124	147	101	133	105
Jammu and Kashmir State ..	15	7	6	7	..	30	54	54	46	..	51	54	52	41	..	127	143	150	144	..
Mysore State	..	1	..	..	1	25	4	4	10	26	31	40	22	30	26	148	160	133	142	154
Rajputana Agency	35	14	11	21	..	91	48	35	57	..	49	86	50	83	..	105	141	108	152	..
Travancore State	..	..	1	1	1	3	1	2	2	3	20	28	36	41	10	86	91	104	99	44
Western India States Agency† ..	84	..	..	..	..	125	..	..	..	..	44	..	..	..	..	87	..	..	..	..
MUSLIM.																				
INDIA.	40	9	9	10	9	107	30	35	39	43	36	43	38	34	33	91	99	94	98	108
Ajmer-Merwara	42	15	12	19	15	86	45	29	30	41	59	70	57	56	34	75	88	77	80	64
Assam	18	2	1	3	1	90	10	9	12	13	27	31	31	29	22	104	113	109	131	115
Bengal	53	7	7	8	7	176	36	47	57	61	21	26	22	23	22	113	120	113	120	126
Bihar and Orissa	116	34	41	40	37	197	71	86	89	90	35	45	42	36	35	110	122	123	130	125
Bombay	25	10	10	11	10	53	26	25	26	28	47	65	43	48	36	87	98	85	101	77
Burma	3	..	1	1	..	5	..	..	1	..	25	37	31	34	28	72	74	63	69	80
Central Provinces and Berar ..	25	13	12	18	9	55	28	27	39	27	38	48	40	49	35	87	98	94	128	96
Coorg	2	4	2	6	4	13	4	5	3	5	25	21	22	22	15	127	141	140	153	119
Madras	2	2	2	2	3	14	6	7	7	11	21	26	23	22	13	123	119	119	119	104
North-West Frontier Province ..	2	..	1			7	1	3			40	41	35			75	68	58		
Delhi	15	5	5	3	6	33	20	14	10	19	54	60	57	38	47	50	51	65	59	89
Punjab (*including Agency*) ..	10	5				31	13				50	59				57	62			
United Provinces	67	17	18	22	15	115	40	42	43	38	60	70	62	46	45	67	77	73	73	69
Baroda State	18	16	26	87	40	41	33	51	113	68	44	60	57	103	36	86	99	106	172	89
Central India Agency	37	21	32	25	..	69	47	50	51	..	52	64	57	77	..	86	100	104	138	..
Gwalior State	28	27				80	50				59	75				96	108			
Cochin State	..	..	..	..	..	4	1	..	1	3	21	23	21	23	10	109	102	97	92	64
Hyderabad State	76	23	10	20	12	90	39	27	42	40	27	42	21	32	21	99	125	84	106	98
Jammu and Kashmir State ..	7	8	5	7	..	16	21	19	20	..	48	44	36	31	..	46	50	51	52	..
Mysore State	..	..	..	1	2	9	1	2	5	9	20	25	18	26	18	90	101	96	100	106
Rajputana Agency	34	19	10	18	..	71	40	30	28	..	51	80	47	61	..	77	95	78	113	..
Travancore State	1	2	..	1	3	3	1	2	2	4	16	23	30	30	12	83	76	85	72	43
Western India States Agency ..	35	†	†	†	†	32	†	†	†	†	40	†	†	†	†	90	†	†	†	†

NOTES.—(1) The proportions for Provinces include those for Indian States attached to them, except in the case of Madras, where they exclude Cochin and Travancore.

†(2) Separate figures for the Western India States Agency, which has been treated as an independent unit on this occasion, are not available for previous censuses and the figures against Bombay, previous to 1931, must therefore be read as including this unit.

* Excluding Addharmis.

SUBSIDIARY TABLE VI.

Distribution by Civil Condition of 1,000 of each sex at certain ages for selected castes.

Caste.	Distribution of 1,000 males of each age by Civil Condition.																				
	All Ages.			0—6			7—13			14—16			17—23.			24—43.			44 and over.		
	Un-married.	Married.	Wi-dowed.	Un-married.	Married.	Wi-dowed.	Un-married.	Married.	Wi-dowed.	Un-married.	Married.	Wi-dowed.	Un-married.	Married.	Wi-dowed.	Un-married.	Married.	Wi-dowed.	Un-married.	Married.	Wi-dowed.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
Baniya	494	411	95	992	7	1	948	50	2	751	239	10	413	564	23	174	725	101	98	559	343
Bhangi	457	470	73	982	17	1	865	130	5	577	400	23	279	672	49	75	834	91	34	689	277
Bhil	504	463	33	993	7	..	948	51	1	710	285	5	296	688	16	41	914	45	33	828	139
Brahman	486	435	79	986	13	1	931	67	2	759	230	11	494	484	22	167	754	79	82	641	277
Chamar	415	523	62	964	35	1	769	225	6	471	509	20	224	742	34	52	874	74	27	731	242
Chetti	560	406	34	1,000	..	..	999	1	..	975	25	..	776	217	7	161	800	39	17	841	142
Darzi	450	466	84	987	12	1	911	85	4	682	291	27	328	628	44	89	826	85	47	672	281
Dom	392	542	66	964	35	1	811	182	7	530	439	31	242	716	42	53	874	73	48	730	222
Gond	446	509	45	977	22	1	880	118	2	652	338	10	298	679	23	54	893	53	27	809	164
Gujar	509	414	77	994	5	1	927	71	2	737	254	9	458	516	26	143	767	90	59	647	294
Iluvan	599	374	27	1,000	..	..	999	1	..	988	11	1	768	222	10	132	838	30	22	855	123
Jat	539	382	79	996	4	..	953	46	1	798	196	6	530	451	19	204	713	83	82	619	299
Kachhi	441	472	87	987	12	1	894	102	4	591	391	18	279	685	36	83	812	105	38	635	327
Kahar	446	469	85	983	16	1	874	121	5	644	339	17	329	631	40	80	820	100	45	665	290
Kallan	549	408	43	999	1	..	996	4	..	981	19	..	762	228	10	131	821	48	15	816	169
Kayastha	509	432	59	983	16	1	939	58	3	811	176	13	624	353	23	156	785	59	46	742	212
Khatri	559	373	68	999	1	..	983	16	1	923	72	5	672	314	14	212	719	69	91	649	260
Kumhar	442	484	74	976	23	1	831	164	5	567	418	15	308	661	31	82	834	84	34	690	276
Kunbi	367	548	85	926	70	4	687	302	11	440	536	24	217	743	40	85	821	94	44	683	273
Mahar	429	511	60	968	29	3	824	167	9	548	402	50	292	650	58	62	875	63	34	784	182
Maratha	434	496	70	978	18	4	855	137	8	652	326	22	415	560	25	82	840	78	51	721	228
Megh	474	443	83	970	22	8	918	69	13	757	202	41	437	501	62	124	789	87	62	697	241
Momin (Julaha, etc.)	449	473	78	974	24	2	853	142	5	615	367	18	317	650	33	81	823	96	32	697	271
Naibrahman	451	469	80	975	24	1	857	139	4	631	355	14	337	629	34	97	808	95	43	666	291
Namasudra	472	472	56	979	19	2	921	70	9	781	199	20	458	526	16	87	855	58	15	784	201
Nayar (Nair)	612	353	35	1,000	..	..	999	1	..	990	10	..	864	129	7	230	729	41	42	820	138
Od	499	439	62	965	33	2	903	89	8	756	220	24	508	453	39	94	832	74	25	763	212
Pathan	528	410	62	987	12	1	935	62	3	817	171	12	591	381	28	158	767	75	45	735	220
Prabhu	580	385	35	997	3	..	971	28	1	870	126	4	845	149	6	179	794	27	24	775	201
Rajput	508	418	74	988	11	1	931	66	3	766	223	11	504	474	22	187	737	76	86	647	267
Santal	498	464	38	983	17	..	924	75	1	723	265	12	397	576	27	69	882	49	22	834	144
Shan	534	381	85	1,000	..	..	1,000	..	..	981	16	3	703	242	55	164	719	117	41	717	242
Tanti	353	593	54	927	71	2	610	377	13	404	564	32	251	710	39	41	896	63	15	818	167
Teli	457	491	52	975	24	1	836	161	3	645	346	9	426	552	22	79	862	59	22	782	196
Viswabrahman, etc.	470	453	77	983	16	1	900	96	4	689	295	16	420	552	28	112	798	90	45	690	265
Yadava	412	511	77	959	39	2	762	230	8	523	451	26	311	649	40	84	827	89	30	708	262

SUBSIDIARY TABLE VI—*concld.*

Distribution by Civil Condition of 1,000 of each sex at certain ages for selected castes—*concld.*

Caste.	Distribution of 1,000 females of each age by Civil Condition.																				
	All Ages.			0—6			7—13			14—16			17—23			24—43			44 and over.		
	Unmarried.	Married.	Widowed.	Unmarried.	Married.	Widowed.	Unmarried.	Married.	Widowed.	Unmarried.	Married.	Widowed.	Unmarried.	Married.	Widowed.	Unmarried.	Married.	Widowed.	Unmarried.	Married.	Widowed.
1	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43
Baniya	349	458	193	982	17	1	849	148	3	263	717	20	34	916	50	9	747	244	6	317	677
Bhangi	355	529	116	974	25	1	715	280	5	179	804	17	42	930	28	15	861	124	10	422	568
Bhil	448	464	88	992	8	..	862	136	2	359	631	10	69	913	18	14	884	102	8	481	511
Brahman	315	469	216	980	19	1	769	223	8	228	736	36	40	884	76	11	731	258	7	321	672
Chamar	320	551	129	953	46	1	587	405	8	131	847	22	34	936	30	11	853	136	7	410	583
Chetti	422	422	156	1,000	..	..	978	21	1	656	332	12	155	812	33	22	819	159	6	378	616
Darzi	350	506	144	956	42	2	697	296	7	291	690	19	62	894	44	19	816	165	16	414	570
Dom	284	558	158	936	63	1	538	451	11	177	786	37	43	902	55	15	797	188	26	370	604
Gond	353	510	137	968	31	1	765	230	5	329	652	19	75	897	28	22	852	126	9	415	576
Guj	377	503	120	987	12	1	781	216	3	286	701	13	58	915	27	14	861	125	6	453	541
Iluvan	487	381	132	1,000	..	..	995	5	..	818	175	7	253	708	39	35	816	149	13	405	582
Jat	407	477	116	992	8	..	860	138	2	479	572	9	106	876	18	20	877	103	9	467	524
Kachhi	338	516	146	984	14	2	707	286	7	127	847	26	34	928	38	13	825	162	13	350	637
Kahar	340	519	141	973	25	2	722	271	7	227	749	24	56	911	33	14	838	148	10	432	558
Kallan	403	416	181	999	1	..	986	14	..	784	212	4	192	776	32	15	785	200	5	328	667
Kayastha	351	451	198	973	25	2	853	141	6	285	678	37	44	876	80	11	735	254	6	329	665
Khatri	429	424	147	998	2	..	957	42	1	579	414	7	117	855	28	23	818	159	11	387	602
Kumhar	343	525	132	967	32	1	669	325	6	215	764	21	55	912	33	14	851	135	7	435	558
Kunbi	260	580	160	889	108	3	467	519	14	118	848	34	40	914	46	11	816	173	7	423	570
Mahar	322	528	150	939	57	4	622	362	16	258	680	62	73	869	58	20	821	159	17	428	555
Maratha	318	532	150	916	79	5	611	379	10	355	622	23	70	878	52	23	811	166	16	412	572
Megh	380	468	152	962	29	9	754	219	27	376	548	76	156	764	80	74	733	193	62	459	479
Momin (Julaha, etc.)	359	521	120	958	41	1	694	300	6	238	737	25	69	900	31	21	855	124	13	435	552
Naibrahman	340	523	137	960	38	2	693	301	6	227	750	23	64	898	38	18	841	141	13	420	567
Namasudra	297	484	219	964	34	2	569	420	11	65	889	46	16	867	117	11	661	328	7	254	739
Nayar (Nair)	444	370	186	1,000	..	..	989	10	1	735	250	15	260	683	57	48	744	208	13	337	650
Od	384	460	156	965	33	2	838	150	12	396	568	36	67	868	65	17	791	192	12	386	602
Pathan	416	460	124	983	16	1	875	123	2	489	495	16	147	823	30	38	838	124	23	434	543
Prabhu	505	375	120	981	14	5	970	25	5	803	185	12	298	675	27	34	791	175	21	409	570
Rajput	345	474	181	982	17	1	806	188	6	322	650	28	68	881	51	17	782	201	9	356	635
Santal	417	461	122	982	17	1	854	140	6	371	599	30	117	829	54	20	833	147	8	445	547
Shan	456	391	153	1,000	..	..	1,000	..	..	789	180	31	294	610	96	67	782	151	24	400	576
Tanti	245	585	170	868	127	5	428	550	22	137	829	34	28	928	44	8	810	182	2	375	623
Teli	348	507	145	956	43	1	707	287	6	297	688	15	70	899	31	15	824	161	8	389	603
Viswabrahman, etc.	356	494	150	972	27	1	757	237	6	292	683	25	71	882	47	17	815	168	11	411	578
Yadava	306	535	159	936	61	3	600	386	14	202	760	38	52	895	53	12	814	174	9	405	586

APPENDIX TO CHAPTER VI.

(A. C. TURNER).

Some notes on marriage in the United Provinces.

A general tendency is noticeable among the more educated Hindus to omit the less important ceremonies in connexion with marriage, and to spend less on the celebration of marriages and other social events. This is largely economic. For instance, the *thauna* (third and final visit of husband to bring his bride from her house to his) and *ala chala* (after which the wife is free to go backwards and forwards between her parents' house and her husband's without ceremony) are often omitted by Hindus; and those Muslims who formerly practised them now pay less observance to *manjha* or *kona baithana* (the segregation of the bride from her parents and elders just prior to the wedding), *chauthi* (the first visit of the wife to her parents' home after the *rukhsati* and her subsequent return with her husband), and *chala*. The commonest form of marriage among ordinary castes is *paupujia* or *dola*. This differs from the *charhawa* marriage of the higher castes only in that the bride and her people come to the bridegroom's house for the *biyah* rites to be performed instead of those rites taking place at the bride's home. The bridegroom goes to fetch her at the *gauna*.

A variation of the *paupujia* custom occurs in the case of certain Vaishya sub-castes. After the marriage has been arranged and the date fixed the bride's parents go to the town or village where the bridegroom's family lives, take a house on rent and all the ceremonies are performed in this rented house instead of at the bride's home. This variation is known as *utha biyah*. Rajbhat Umars, a sub-class of the Umar Vaishyas, practise yet another variation. When the marriage has been settled the bridegroom's father with some of his relatives visit the bride's home for 2 or 3 days. Then they depart with the bride to their home and all the pre-marriage ceremonies which are normally carried out at her home are performed at the bridegroom's. The bride's people come 2 or 3 days before the marriage and stay at the bridegroom's house and then the marriage takes place on the appointed day. This practice is, however, falling into disfavour.

Ghar Damadi, Gharjawai, or Gharjamai.

In paragraph 231 on page 220 of the 1911 Report Mr. Blunt refers to Beena marriage. Here the suitor goes to live with the girl's family and works there, in a capacity which is part servant, part debtor, for a certain period before he marries her. Mr. Blunt gave two views as to its origin which were not mutually exclusive and added "At the present day, whatever the original object of the custom, it is used as a means of getting a wife without paying a dowry in cash or kind. It is restricted to poor people who work out the dowry in labour. Nominally at all events, connubial intercourse is forbidden, the son-in-law *in futuro* gets maintenance, but has no claim on the father-in-law's property. The custom is found among the Bhuiyar, Bind, Chero, Ghasiya, Kharwar, Majhwar, Gond and Parahiya castes: its usual name is *ghar-jawai gharjaiyan*, or *ghardamada*. The normal period appears to be three years." This practice, which has in it the elements of marriage by purchase, still continues among not only the above castes but also among Kuchbandia Kanjars and Kalabaz Nats. There is no fixed period of service. Among Brijbasi Gual Nats of Sahaswan tahsil in district Budaun, a bridegroom married in this way cannot leave his father-in-law's house even after serving the agreed period and marrying the girl but must stay and serve after marriage so long as his wife's parents are alive. If he wishes to leave earlier he must pay the parents a bride-price which is then fixed by the tribal *panchayat*.

But this practice in a somewhat modified form is now to be found among most Hindu castes and even among Muslims. Formerly a man who lived in his father-in-law's house or in his sister's husband's house was very much looked down upon, so much so that there was a more forcible Hindi proverb than that quoted by Mr. Blunt at the foot of page 220, which ran—

"*Kutta pale so kutta, sas ghar jamai aur bahin ghar bhai.*"

(he who tames a dog is a dog, a man living in his mother-in-law's house and a man living where his sister is married are the other two dogs).

There has, however, been a perceptible change in the social outlook and although such arrangements are still not regarded with much favour the three 'dogs' are not treated with quite such contempt as in the past. Almost everywhere some cases are met with of a son-in-law going to live with his wife's parents, under the following circumstances:—

(*i*) when the girl's father is well-to-do and has no sons;

(*ii*) when the girl's family is very poor and wants the help or a strong man; and

(*iii*) when the son-in-law is a poor man and cannot pay a dower.

In such cases the man usually settles permanently with his 'in-laws'. If the girl's family is well-to-do and the bridegroom is in fair circumstances the bride's father often has to pay large sum to the latter to induce him to accept the stigma attaching to a *ghar-jawai*; otherwise there is no payment, the suitor being treated as the debtor. In this form the practice is not at all uncommon being found chiefly among the lower Hindu castes and poor members of the

higher castes, reported from districts as far apart as Bahraich, Ballia, Hamirpur, Budaun, etc. As regards actual numbers Rae Bareli district reports the following 2,490 instances—

Chamar	433
Ahir	373
Pasi	371
Lodh	174
Kurmi	155
Murao	135
Brahman	125
Koeri	87
Rajput	85
Gadaria	80
Muslim	62
Others	410

Etawah district reports some 2,000 instances of *ghar-jawai* and of a man living at his brother-in-law's house. These together included roughly Rajputs 800, Brahmans 400, Ahirs 300 and Chamars 100.

Bara Banki district reports the following 100 instances :—

Kurmi	18
Brahman	16
Pasi	16
Ahir	11
Chamar	8
Rajput	6
Others	25

Other districts reported fewer members. From Gonda comes the following—One father with an only daughter entertained a succession of *ghar-jawais*. The first actually married her and died. Another man was brought to take his place. He proved unsuitable and was turned out after 18 months, before marriage. The same fate overtook the next suitor. When yet another hopeful took up residence the *panchayat* thought matters had gone far enough and intervened. It cost the father a fine of Rs. 46 and a goodly feast for the *panches*.

Ghar baithna.

Somewhat allied to the custom of *ghar-jawai* is the practice of *ghar baithna*. Here the woman is usually a widow and mistress of her own house and property with no male collaterals or other relations of her husband. As a result the man who marries her usually belongs to a religion or caste that permits widow re-marriage. The husband proceeds to live in his wife's house. Gonda district reports this as quite common. From Rae Bareli district the following figures were collected—

Ahir	414
Pasi	369
Chamar	353
Lodh	232
Murao	135
Koeri	131
Gadaria	107
Kurmi	89
Teli	72
Brahman	60
Muslim	60
Nai	47
Kachhi	46
Bharbunja	41
Vaishya	37
Lohar	35
Kumhar	31
Goriya	28
Tamboli	27
Rajput	26
Kahar	22
Others	190
Total	2,552

This practice is viewed with dislike and among the higher castes the *garh baitha* is despised and outcasted. It is therefore most common among the lower castes: Brahmans, Rajputs and Vaishyas would only contract such an alliance if they were very poor men and the widow's possessions attractive.

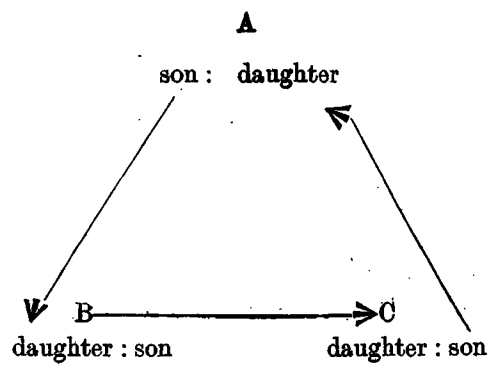
Marriage by capture.

Marriage by capture is non-existent, thought as Mr. Blunt mentioned there are traces of its past existence in some of the marriage rites. Quite different in nature is the curious custom observed by Goriyas of the Gorakhpur district (who appear to be the outcome of fusion between a sub-caste of Mallahs and a sub-caste of Kahars). Before the rite of *sendhurdan* (marking the parting of the bride's hair with red lead) is performed the bridegroom leaves the wedding party in assumed umbrage and goes and sits on a roof erected specially for the purpose. The bride then goes to him and entreats him to marry her saying "My lord, come and marry me. You need do no work as I will work and earn money for you". The bridegroom and bride then descend from the roof and the marriage proceeds. The origin of this peculiar rite is unknown.... .....

Marriage by exchange

In this province the practice is found in two forms. The first is *adala badala, santa,* or *golawat,* in which form the son of one man marries the daughter of the other, and the second man's son marries the first man's daughter. This form is found chiefly among the ordinary castes such as Kuchband Kanjars, Gual Nats, Dharkars, Tarkihars, Chhipis, Khatiks, Gadarias, Barhais, Lohars, Kurmis and Kahars. In some parts Sonars adopt it, and it is quite common among Mathuria Chaube Brahmans. Jains sometimes arrange such marriages. This form, however, is not popular and is often looked down upon.

The more popular form is known as *tigadda,* or *tiptha* which is a triangular arrangement thus:—



This arrangement is common everywhere among the ordinary castes and often among the higher, including Vaishyas. In the east of the province where Muslims are largely descendants of converts from Hinduism who have retained many Hindu customs, they too practise the custom.

Polyandry.

Polyandry is still practised among all classes and castes in Jaunsar-Bawar (district Dehra Dun). A few of the more educated have taken to monogamy themselves but at the same time have no objection to giving a daughter in marriage to all the brothers of one family. The reason given by these folk is economic. Separate marriages of brothers may lead to division of the family property which when broken up would not suffice to maintain individual members of the family with their own separate establishments. That polyandry does not continue in Jaunsar-Bawar entirely on account of the dearth of females is shown by the fact that many girls from there are married into the Punjab.....

Divorce.

Chhut (divorce) is practised in Jaunsar-Bawar. A husband can at any time divorce his wife either verbally or in writing provided the next man who takes her to wife pays double the *jeodhan.* Divorces without serious reasons are, however, growing less common..... In Chakrata tahsil of Dehra Dun (Jaunsar-Bawar) the bridegroom has to pay a small sum to the bride's father as *jeodhan* (as ceremonial gift) which is intended to cover the expenses of the marriage. .....

Adoption.

Under the Hindu law, a son may be adopted but not a daughter. Among Jogila Nats, Khalkhor Nats (reported from Budaun) and Kuchband Kanjars, however, the custom of adopting a daughter also exists.

CHAPTER VII.

Infirmities.

Instructions to enumerators.

103. As in the previous census the enumerators were instructed to record the fact for each individual who was found to be insane, deaf and dumb, blind of both eyes or suffering from corrosive leprosy. They were also warned against recording as blind those who suffered from loss of the sight in one eye only, or as lepers persons who suffered from leucoderma. In Bengal blind of both eyes was defined as " unable to count the fingers of a hand held up at one yard's distance ". These instructions were counsels of perfection and it is not claimed that the figures published in Table IX are as reliable as those published in the other tables in the same volume. The return of infirmities at the Indian census has probably never been satisfactory. Notwithstanding instructions to the contrary, it seems likely that many feeble minded and dotards are entered as insane and that many who are partially blind are returned as totally blind. It is probable of course, that the excess numbers so obtained do not even balance the omissions in the return of the infirmities at all where these infirmities none the less exist. In the case of leprosy,* however, it is practically certain that the census figures in India fail entirely to represent the true state of affairs. Dr. Muir and others, who have investigated the prevalence of leprosy by means of local surveys, have concluded that the census figures represent one tenth of the actual. The attempt to record physical disabilities through the medium of the census was abandoned in England and Wales ten years ago as a failure, and earlier still in the United States of America. It was nevertheless decided not to abandon the attempt to return this disease at the census, as the figures which the census is able to provide afford some basis for an estimate of true numbers in the light of the difference between the figures obtained from local surveys and the census returns for the same areas. At the same time the tabulation of infirmity by caste was abandoned in the interests of economy.

Defects of the Returns.

104. One obvious criticism on the return of infirmities is that while the first three mentioned are defects which may be observed by an enumerator, the fourth is a disease which can only be detected by expert eyes and should not be made the subject of a purely lay return. Those cases which are obvious to the lay eye are burnt out cases no longer infectious. The infectious cases are those at an earlier stage of development, and it is by a comparison of the number of these early cases with the number of those in which the disease has run its course that the increase or decrease of prevalence can be ascertained. Enumerators cannot be expected to add medical diagnosis to their limited ability to record fact. Apart from this, it is quite obvious that there will be much wilful concealment of such a disease as leprosy, and since the number of females returned as lepers is 40,019 against 107,892 males, it may perhaps be inferred that concealment among females is greater, as indeed might be expected in view of customs such as that of purdah. On the other hand it seems to be generally held that leprosy attacks a greater proportion of males than of females, so that it is impossible to say in what degree the lower figures for females are due to the natural incidence of the disease and in what degree to the circumstances of enumeration, and the concealment inevitable from it. Similarly insanity is likely to be concealed particularly in the case of females, while there is certain to be a tendency to conceal cases of deaf-mute children. Moreover, the use of such a term as insanity is frequently a matter of personal temperament and of the very variable value that different individuals attach to identical words. In fact a young lady in Lucknow Cantonment, filling in the schedule for her husband, who was out at his work but had doubtless had the misfortune to offend her, described him as insane, deaf-mute, blind and leprous—an extreme case, no doubt, but illuminating. One may fancy an enumerator enquiring as he fills in his schedule as to the sanity of some individual whose behaviour struck him as unusual. The first villager might answer " Oh, he does be a bit queer, but not what you'd call mad ", whereas the next might perfectly well say of the same individual " Mad, is it ? Indeed, a March hare 'd be sane to him ". What is the enumerator to put down, and what will be the value of his record statistically or demographically ? The

*A return of elephantiasis would probably present less difficulty to the census staff and in Travancore State such a return was added, though even of this infirmity it was found that concealment was general there. In the Nicobar Islands it was proposed to substitute this return for that of leprosy, which is either absent or undetected, whereas elephantiasis is a common scourge, but the proposal was not in the end carried out.

term 'blind' is liable to a not dissimilar diversity of interpretation, and although the instructions are that only those blind in both eyes shall be recorded as such, this is definitively effective only to the extent of excluding from the record persons with one unquestionably sound eye. It is true of course that the bias of one enumerator is apt to be corrected by the bias of another in the opposite direction, and possible that exaggeration and meiosis so balance one another in the returns that a fairly correct conclusion is reached, but none the less it is impossible to doctor the returns of infirmity like the admittedly inaccurate returns of age, so as to produce out of amalgamated inaccuracies results which are a sufficiently accurate representation of the facts. Moreover, some of the inexplicable fluctuations from census to census, and inconsistencies that appear between provinces, make the accuracy of the figures even of blindness open to impeachment, though the returns of blindness have generally been regarded as comparatively accurate, and it is perhaps significant that the Blind Relief Association found by a count that the totally blind in Bijapur District in 1920 numbered 260 per 100,000 as against 70 returned at the census of 1911. On the other hand it cannot be denied that the ratios of the infirm to the rest of the population at successive ages do show a consistency from census to census which is incompatible with any kind of error but a constant one, indicating that however inaccurate our figures may be numerically they have some real comparative value from census to census. The census figures of infirmity are therefore presented subject to the proviso that although they do indicate tendencies on general lines their value is only comparative, as they cannot be taken to represent actual numbers. Their treatment is therefore primarily confined to this comparative aspect whether in time or in place, and in view of the nature of the material is perhaps justifiably brief.

Reference to statistics.

105. The main statistics will be found in Imperial Table IX, and the subsidiary tables at the end of this chapter give proportionate and comparative figures. The marginal statement shows the total number of persons suffering from each of the four infirmities recorded for the last fifty years. The decrease from 1881 to 1891 was regarded by the Census Commissioner for that year as due to increasing accuracy of enumeration. In 1901 the still further decrease was again attributed in part to the same cause and in part to severe famine mortality, the incidence of which is likely to be most heavy on those unfitted by infirmity to survive excessive privation. It is to be feared that except in the case of blindness after 1881 the theory of increasing accuracy as an explanation of decreasing infirmity was after all a delusion, for the figures of insanity have increased beyond that of 1881, and in 1911, the figures of deaf-mutes passed those of 1881, while the figures of leprosy are believed from the results of scientific surveys of limited areas to represent about one-tenth of the actual number of sufferers from that disease. The marginal table gives the numbers, per 100,000, of those afflicted with the four diseases according to the census figures, affording a better means of comparison than the crude figures. In 1921 the effect of the influenza epidemic was regarded in Bihar and Orissa as responsible for exceptional mortality among the afflicted. In the Central Provinces on the other hand the unexpected rise in their numbers and still more in their ratio was put down to the incidence of influenza's being adversely

Infirmity.	Number afflicted.					
	1931.	1921.	1911.	1901.	1891.	1881.
Insanity	120,304	88,305	81,006	66,205	74,279	81,132
Deaf-muteness	*230,895*	*189,644*	*199,891*	*153,168*	*196,861*	*197,215*
Blindness	*601,370*	*479,637*	*443,653*	*354,104*	*458,868*	*526,748*
Leprosy	*147,911*	*102,513*	*109,094*	*97,340*	*126,244*	*131,968*
Total	1,095,678*	860,099	833,644	670,817	856,252	937,063

* Excludes multiple infirmities.

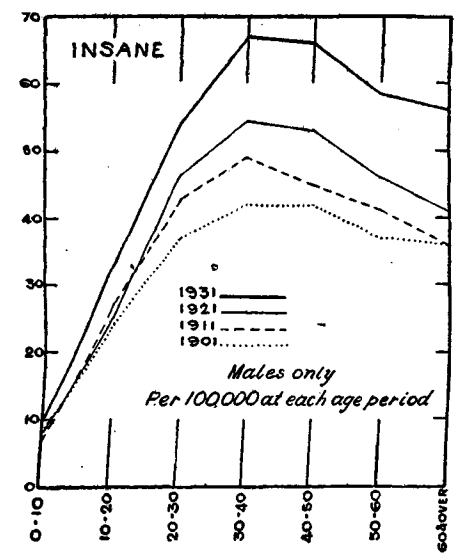
Infirmity.	No. afflicted per 100,000 of population.					
	1931.	1921.	1911.	1901.	1891.	1881.
Insanity	34	28	26	23	27	35
Deaf-muteness	66	60	64	52	75	86
Blindness	172	152	142	121	167	229
Leprosy	42	32	35	33	46	57
Total	314*	272	267	229	315	407

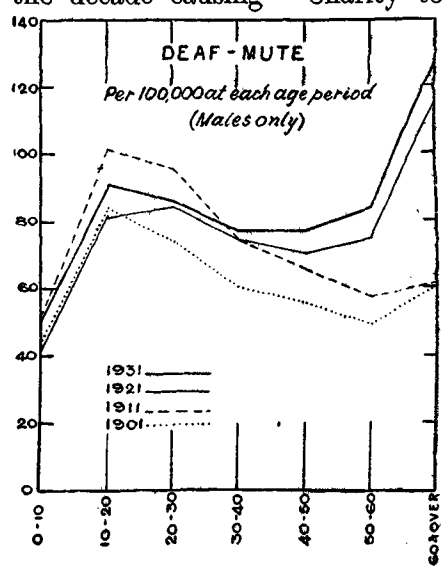
* Excludes multiple infirmities.

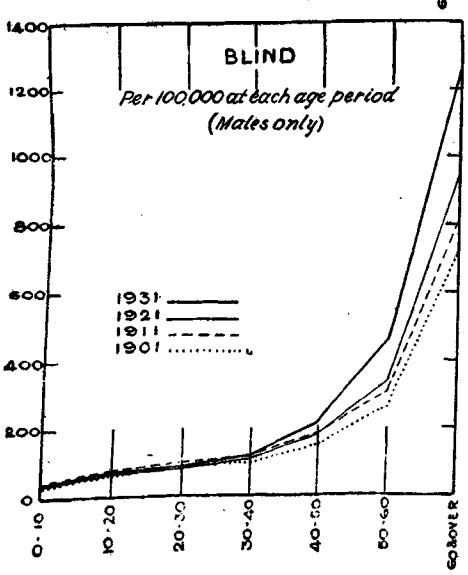
selective of healthy adults, and our confidence in even the comparative reliability of the figures is still further shaken. The total number of persons, 1,095,678, returned as afflicted in 1931 included 120,304 insane, 230,895 deaf-mute, 601,370 blind and 147,911 lepers. The marginal table shows their distribution by provinces, their provincial increase since 1921, and the ratio of this increase to that of the increase of population. The general increase in ratio as well as in numbers may be attributed provisionally to increased accuracy of enumeration. As however even a considerable increase in that direction must be far removed from real accuracy, the explanation is offered as likely but without any enthusiastic conviction of reality. The Census Superintendent of Bihar and Orissa regards the increase in the numbers of afflicted persons as due to the favourable economic condition of the decade causing "Charity to

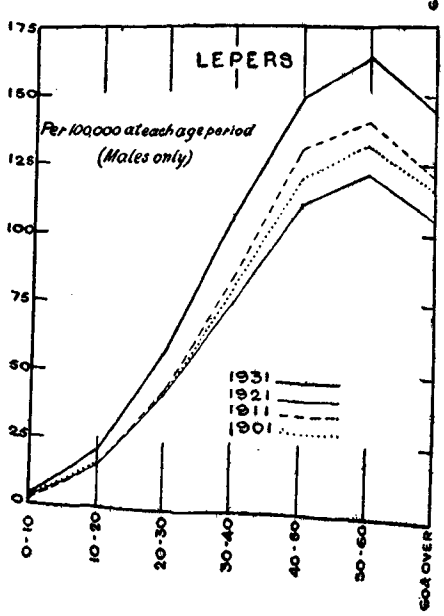
Province, State or Agency.	Infirm per 100,000 of population 1931.	Variation, increase+ decrease— since 1921.	Ratio of increase+ / decrease— infirm per 100,000 of increase of population.
INDIA.	313	+238,141	+690
1. Ajmer-Merwara	501	+1,255	+1,930
2. Andamans and Nicobars	88	—39	—1,641
3. Assam	297	+5,918	+471
4. Baluchistan	316	—556	—806
5. Bengal	226	+14,753	+423
6. Bihar and Orissa	263	+43,904	+1,004
7. Bombay (including Aden).	346	+27,152	+762
8. Burma	466	+10,940	+740
9. Central Provinces and Berar.	434	+11,618	+578
10. Coorg	152	+112	+21,918
11. Delhi	141	+4	+3
12. Madras	285	+51,475	+1,170
13. N.-W. F. P.	206	—937	—539
14. Punjab	350	+2,873	+85
15. United Provinces	396	+46,015	+1,482
16. Baroda	456	+2,245	+709
17. Central India	272	+3,866	+613
18. Cochin	287	+873	+386
19. Gwalior	244	+170	+52
20. Hyderabad	154	—7,085	—361
21. Jammu and Kashmir.	405	+2,850	+737
22. Mysore	198	+3,018	+522
23. Rajputana	337	+13,976	+1,003
24. Sikkim	184	+9	+32
25. Travancore	214	+3,732	+342
26. Western India States	535	*	*

* As separate figures are not available for 1921 this unit has been combined with the Bombay Presidency for purposes of calculating variation.









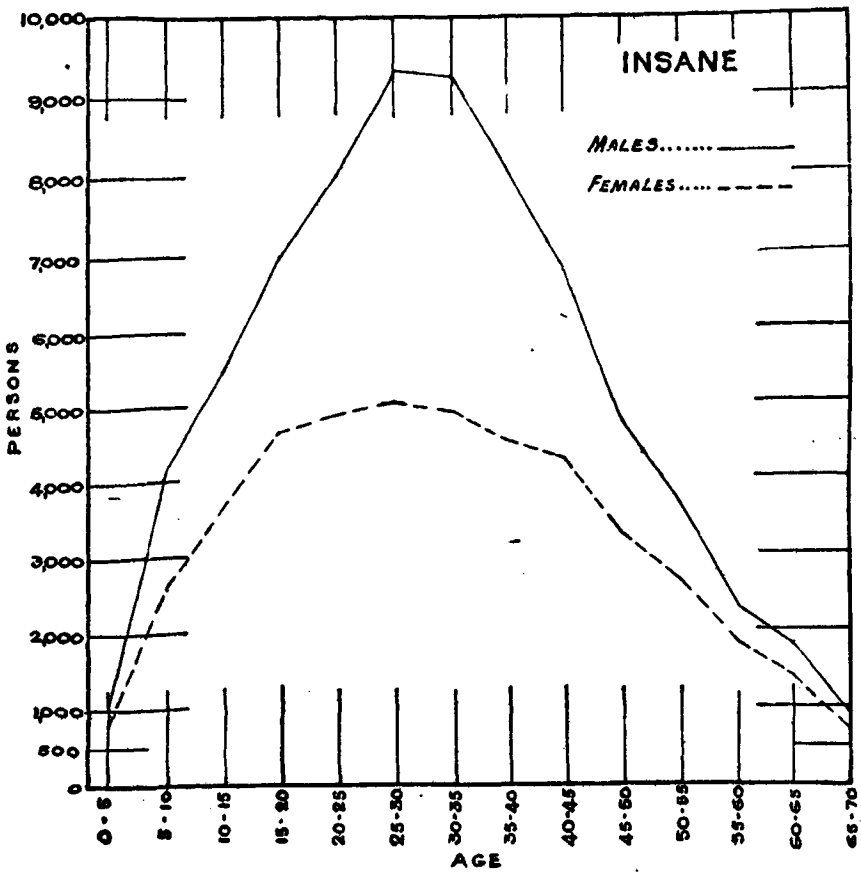
unloose her purse-strings" and increasing the likelihood of the survival of the unfit, an opinion with which the Census Superintendent of the United Provinces agrees; nor can the probability of this as a factor in the increase be denied. In illustrating the ages of the incidence of infirmity by diagram the curves by sexes have been drawn on the actual figures in preference to the figures of the ratio of the infirm to the population. At previous censuses these curves have been drawn for each sex on the number of infirm per 100,000 of population, but as the infirm are likely to have a very different death rate to the healthy, and as the relation of their numbers to the population figure is in any case dubious, curves drawn on the ratios would seem to be more likely to be misleading in case of inaccurate figures than a curve of which the inaccuracy is the visible inaccuracy of defective figures and not the less obvious distortion of a ratio based on them. A reference to the diagrams of Chapters IV and V will give the necessary comparison between the age curves of the infirm and those of the population as a whole. For the sake of comparison, and to illustrate the undoubted consistency between the infirmity returns of successive decades, ratio curves based on the figures of males only (as being more accurate than the figures for females) are shown above for four decennia.

Insanity.

106. The marginal table shows the number of insane per 100,000 of the population in India and the various provinces and the variation correlated to the increase in population since 1921 on the same basis. The vague and unsatisfactory nature of the return of insanity is admirably illustrated in the different views of Census Superintendents themselves; thus while one says "idiocy is usually a congenital defect and one would have expected a much higher proportion of insane in the earlier age periods" another condemns his returns for showing just such an increase on the ground that "complete insanity manifests itself at adolescence" and "returns to be accurate must exclude the congenitally weak-minded". In Assam one district showed an extraordinary rise in the number of insane in 1921 from 52 to 255 and a similar drop to 62 in 1931, while an adjoining district with a smaller population living under almost identical conditions shows in 1931 a rise from 242 to 430. The return of insanity is naturally lowest in the lowest age groups. Lunacy is likely to be undetermined among young children; idiocy is unlikely to be admitted. Among females the incidence at all ages is less than among males. Part of this difference is to be attributed to concealment, part to the fact that women lead a more secluded if monotonous life, are less subject to exposure and anxiety, and are less liable to indulge in excesses of various kinds. The age curves (which in the case of that for females should

Province, State or Agency.	No. of insane per 100,000 of population, 1931.	Variation per 100,000 of increase since 1921.
1. India	34	+93
2. Ajmer-Merwara	39	+191
3. Andamans and Nicobars	24	—1,136
4. Assam	59	+106
Baluchistan	48	+1
6. Bengal	44	+81
7. Bihar and Orissa	21	+118
8. Bombay (including Aden).	48	+92
9. Burma	88	+90
10. Central Provinces and Berar.	28	+72
11. Coorg	19	+3,131
12. Delhi	14	+8
13. Madras	33	+156
14. N.-W. F. P.	31	+53
15. Punjab	29	+37
16. United Provinces	23	+136
17. Baroda	56	+120
18. Central India	23	+115
19. Cochin	53	+113
20. Gwalior	13	—1
21. Hyderabad	15	—16
22. Jammu and Kashmir.	39	+36
23. Mysore	27	+158
24. Rajputana	23	+98
25. Sikkim	5	—21
26. Travancore	41	+73
27. Western India States	45	*

* For purposes of calculating variation this unit has been combined with Bombay of which it formed part in 1921.



be transposed to a greater height to allow for concealment) show this clearly, as that for females reaches a point much nearer its maximum at 15 to 20 years than that for males, and is without the 25-35 peak. This relatively earlier rise in the figures among females is to be attributed to the strain of premature and excessive maternity, while the later rise in the male figures corresponds to the entry into life with family and working cares. From the age of maturity—about 35 years, the males die off more quickly than the unaffected, while for women the curve is far less steep and the fall is not marked until after the climacteric. Generally speaking insanity is an affliction of the adult period, unlike deafmuteness, which is one of the young, or blindness, which is severest in old age. To judge by the Reports of the Public Health Commissioner on mental hospitals the principal causes of insanity in India are mental strain, critical periods of life (*e.g.*, puberty), *cannabis indica*, presumably in the form of ganja or some other preparation, privation, and diseases consequent on malnutrition, epilepsy and syphilis. The total number of patients in mental hospitals in 1930 was 11,147. In 1921 it was 9,919. If any interest is felt in the extravagant and unpleasant methods of treating insanity in Indian folk-medicine a reference may be made to pages 415-417 of Mr. O'Malley's Report on Bengal, Bihar and Orissa for 1911.

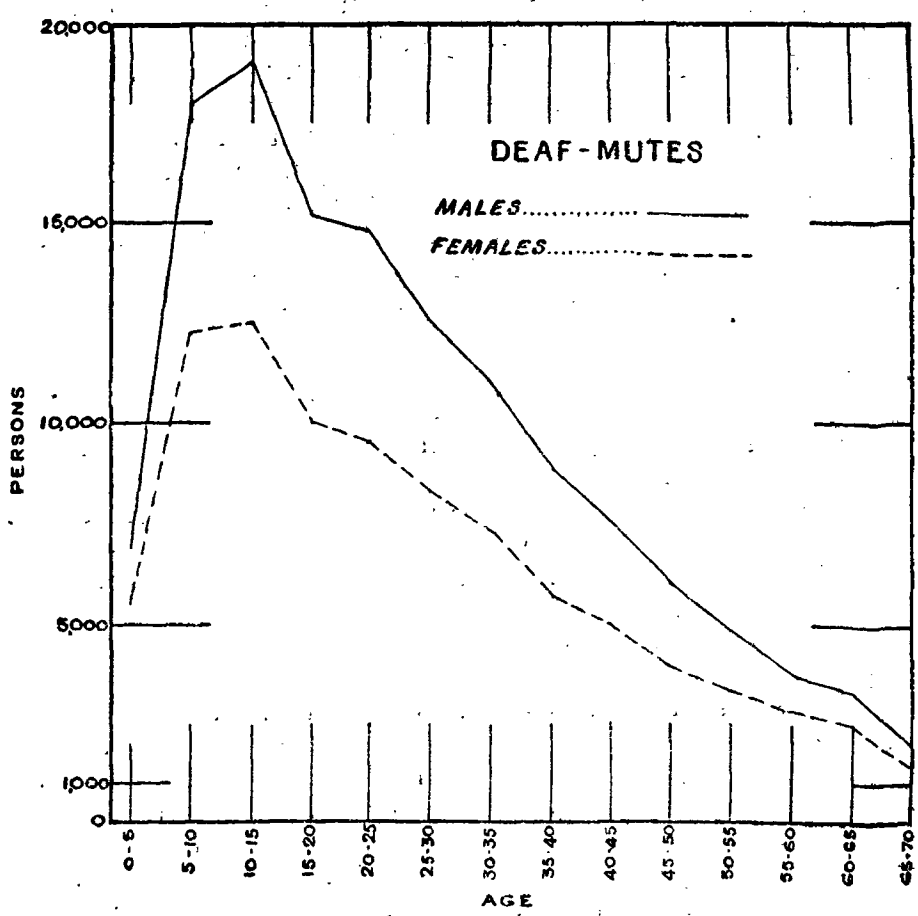
Deaf-muteness.

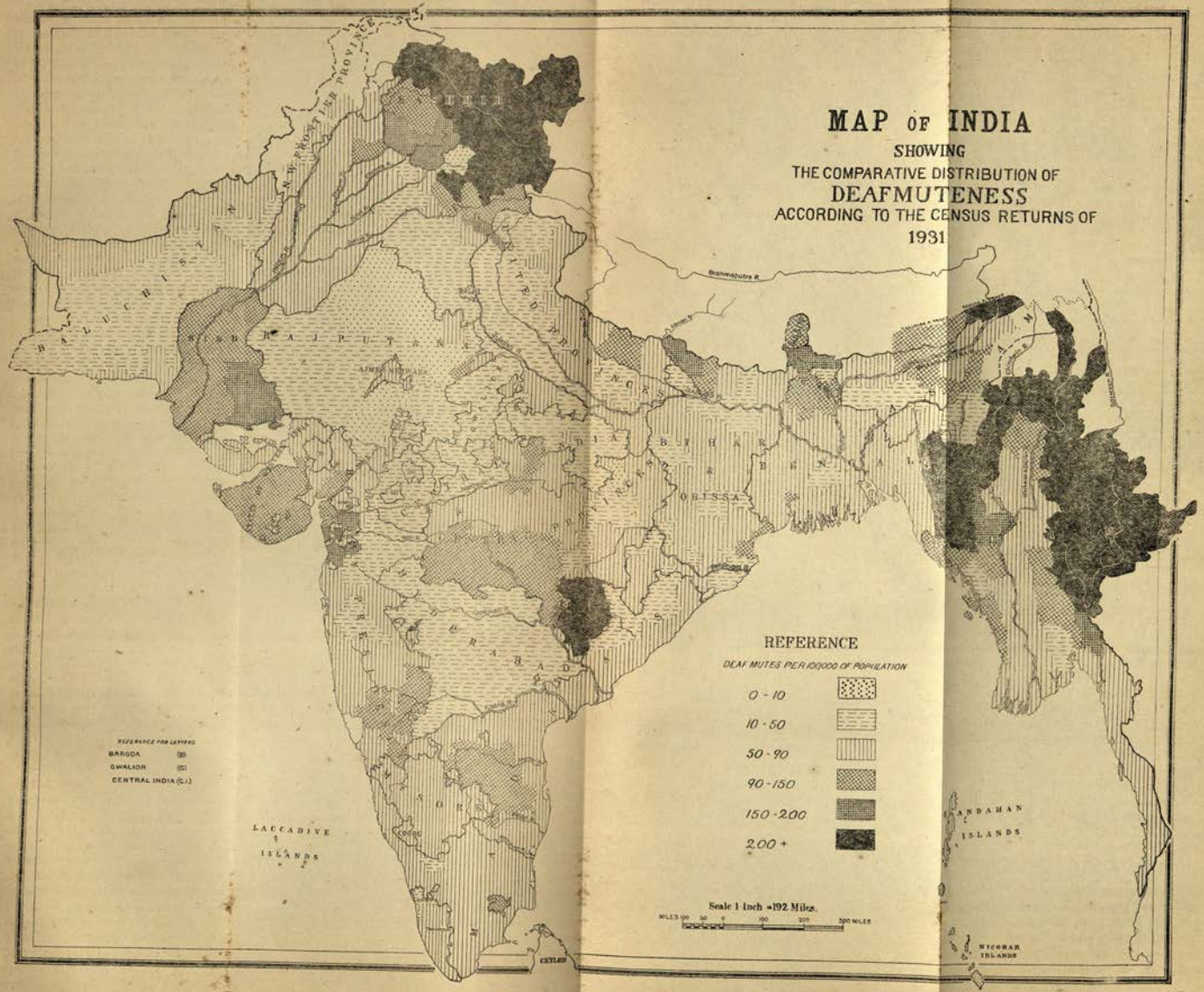
107. The figures of this defect if rightly returned should show a curve decreasing with each age group, since the disease is congenital. Before 1921 the instructions contained the words 'deaf-mute from birth', omitted in 1921 and 1931. The results in 1921 were unsatisfactory as the omission led to an increased number of returns of aged deaf-mutes, presumably cases of deafness in senility, and though this was not the case in all units, *e.g.*, in Cochin State, the error caused by the inclusion of aged persons, probably deaf only, was so marked that it would have been better to have reverted to the 1911 practice of including the words " from birth ", though this on the other hand may lead to the omission of a certain number whose condition is not realised to have been congenital and the Census Superintendent of the United Provinces considers that the omission of the words " from birth " has led to increased accuracy of the return of infirmities as a whole, since it has frequently happened that enumerators apply the words " from birth " to all infirmities instead of to deaf-muteness only. Deaf-muteness in India, as elsewhere, is frequently associated with cretinism and goitre and may therefore be attributed in part to the absence of iodine salts in the soil and consequently in the drinking water. Naturally the absence is most likely to occur in rainy and hilly country where the salts have been washed out of the surface soil at sites inhabited or cultivated for a long period of time. Thus in Baroda the Census Commissioner for that State points out the heavy incidence of deaf-muteness on the upper reaches of certain streams and in the proximity of the Rann of Cutch. In addition therefore to the marginal table of the distribution and variation of this defect by provinces a map has been added indicating

Province, State or Agency.	No. of deaf mute per 100,000 of population 1931.	Variation per 100,000 of increase since 1921.
1. India	66	+120
2. Ajmer-Merwara	73	+418
3. Andamans and Nicobars	27	+252
4. Assam	75	+113
5. Baluchistan	67	—145
6. Bengal	70	+110
7. Bihar and Orissa	63	+147
8. Bombay (including Aden).	78	+230
9. Burma	116	+344
10. Central Provinces and Berar.	78	—56
11. Coorg	62	+15,851
12. Delhi	23	—5
13. Madras	71	+274
14. N.-W. F. P.	66	—173
15. Punjab	69	—95
16. United Provinces	52	+77
17. Baroda	52	+211
18. Central India	29	+23
19. Cochin	40	—7
20. Gwalior	37	—33
21. Hyderabad	26	+17
22. Jammu and Kashmir.	159	+329
23. Mysore	60	+59
24. Rajputana	28	+39
25. Sikkim	149	+71
26. Travancore	57	+66
27. Western India States	91	*

* For purposes of calculating variation this unit has been combined with Bombay of which it formed part in 1921.

its distribution according to the census returns but based on district instead of provincial figures, as this gives a better correlation with geographical features. The returns however are not very reliable and the present census shows an entirely inexplicable drop in the Naga and Garo Hills in Assam, the former of which had in 1921 seven times the total of the rest of that province. Similar fluctuations are recorded in Cochin and in Madras, where the Census Superintendent suggests an apparent cycle of 20 years, and also an association with insanity. This however is admittedly not borne out by the Madras returns and the Census Superintendent for Central India, on the look-out for the same association finds his figures on the whole against it. The Madras Superintendent adds that there is nothing in that province to support any association of deaf-muteness with goitre but the association undoubtedly exists in Assam and Burma. In Madras it may be observed that a high incidence of this deficiency seems to coincide to some extent with a high incidence of scarcity or famine; in all provinces the returns by sex show a greater number of males afflicted than females. There seems to be no biological reason for this, so one is inclined to look for the reason to two possible causes—firstly concealment, secondly a greater loss of deaf-mute girl children as a result of more or less deliberate neglect. Girl children are often enough not wanted anyhow, and the deaf-mutes among them must be so much the more superfluous, once their affliction is realised. The Hyderabad Census Commissioner states that the preponderence of males is a "phenomenon ..... common to most forms of congenital malformation", but quotes no authority for this hard saying, though as more males than females are born the statement is likely to be true at least to that extent, and in Northern Ireland male deaf-mutes exceeded female by 30 per cent. in 1926, and in England and Wales in 1921, 55 per cent. of the inmates of homes for the deaf and dumb were males. In the case of deaf-mutes in India it cannot be denied that the close correspondence in outline of the male and




MAP OF INDIA
SHOWING
THE COMPARATIVE DISTRIBUTION OF
DEAFMUTENESS
ACCORDING TO THE CENSUS RETURNS OF
1931
REFERENCE
DEAF MUTES PER 100000 OF POPULATION
0 - 10
10 - 50
50 - 90
90 - 150
150 - 200
200 +
Scale 1 Inch = 192 Miles.
MILES 100 50 0 100 200 300 MILES
REFERENCE FOR LETTERS
BARODA (B)
GWALIOR (G)
CENTRAL INDIA (C.I.)
LACCADIVE ISLANDS
ANDAMAN ISLANDS
NICOBAR ISLANDS
CEYLON
Brahmaputra R.
BALUCHISTAN
RAJPUTANA
AJMER-MERWARA
BIHAR
BENGAL
ORISSA
ASSAM
HYDERABAD
MADRAS

female curves suggests that they are governed by the same factors. Concealment would account for this, but if it were the only or principal factor one might expect perhaps to see less correspondence in the female to the male curve from 10 to 20 years and a greater correspondence from 0 to 10 years. It will be noticed that the steep rise from 0-5 to 5-10 and the slight rise from that group to the next correspond to the ages at which deaf-muteness becomes first indubitable to the child's parents and then cannot be concealed from neighbours, the girl's curve being here less steep, as one might expect; from the point at which the infirmity is patent there is a steady fall, corresponding to the natural decrease in deaf-mutes, who are usually short-lived, except for a depression at the 15-20 group corresponding to the age of marriage which may indicate a slight inflation of the previous and subsequent groups at the expense of the 15-20 group. There is no clear rise in old age though the increased figure for the group 70 and over must represent a certain inclusion of dotards. As in the case of the other infirmities, this group has not been plotted on the curve, since it covers an indefinite number of age groups and is liable to be misleading. A geometrically decreasing ratio from the 60-65 group would not bring extinction before 135 years, but the inaccuracy of return indicated is less than that of 1921, and whereas the group for 70 and over in all other infirmities shows an increase on the 1921 figure, corresponding no doubt to the increased population, that for deaf-muteness shows a decrease in 1931. The geographical distribution of deaf-muteness shows that the return is not so inaccurate as to obscure the connection between this infirmity and locality, and localities showing a high frequency in 1921 continue to do so in 1931. In particular the distribution of this infirmity shows an association with steep and rapidly drained valleys at comparatively high elevations, and with tarai country which is rapidly drained. Its incidence is lower on plateaux and on alluvial plains, but seems to increase again here and there in deltaic land and also in areas particularly subject to famine, perhaps a not unnatural association for a deficiency disease. Bengal has several institutions for the deaf and dumb which turn out articulating, literate and self-supporting individuals. Madras and Bombay have similar institutions and figures of these institutions and those for teaching the blind, and the numbers of pupils are given in chapter IX, but the total number of pupils compared to those afflicted is insignificant entirely.

Blindness.

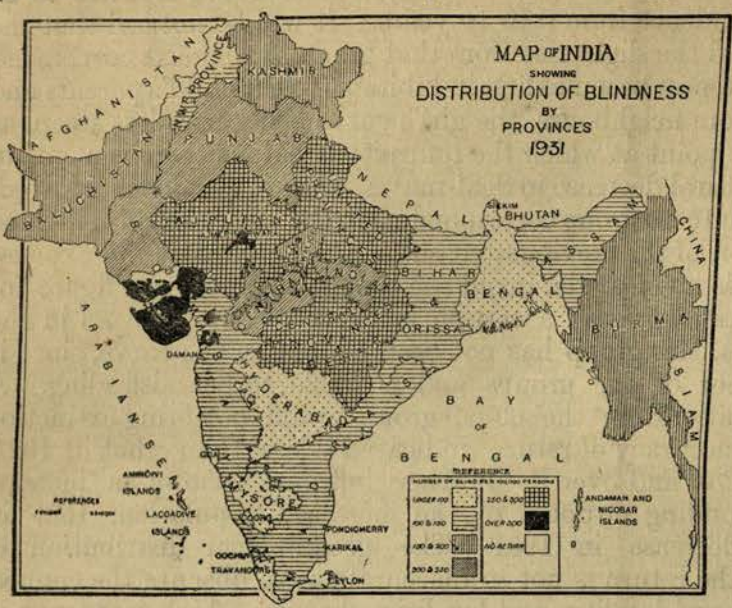
108. The figures of blindness have generally been held by census officers in India to be much the most accurate of the infirmity returns on the ground that there is no particular motive for concealment as this affliction excites neither contempt nor disgust; even so the returns are in some cases open to doubt and in any case concealment is likely in the case of girls of marriageable age. In Ajmer-Merwara and in Madras the incidence in 1921 was heavier on males than on females. This has been reversed in 1931. In Assam the heavier ratio of blindness in the hills has been in the past put down to the insanitary houses of primitive tribes, but it is found to have increased most in 1931 precisely in those districts where education and sanitation have made the most progress. Figures of blindness are on the whole heavier in the drier, dustier and sandier parts of India, but the Census Superintendent in Central India questions the close association between blindness and environment and points out that in western countries 25 per cent. of blindness is caused by congenital anomalies, *opthalmia neonatorum* is responsible for another 25 per cent. and syphilis, injuries and atrophy of the optic nerve for another 10 per cent. each. Even so in Rajputana we find that Jaisalmer, which is nearly all sand, has a low ratio of blindness while "the highest is returned from two such geographical

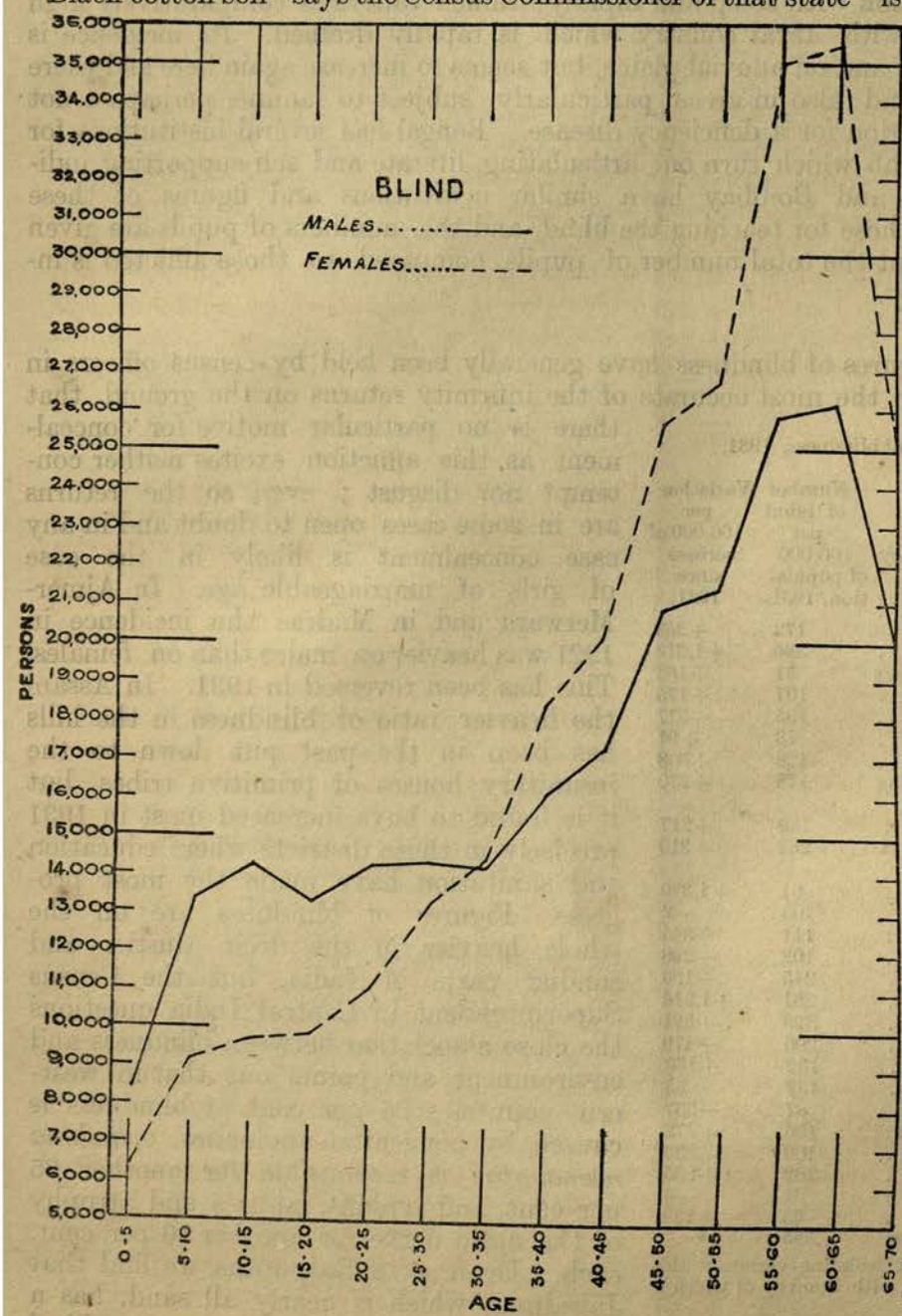
Census figures of blindness, 1931.

Province, State or Agency.	Number of blind per 100,000 of population, 1931.	Variation per 100,000 of increase since 1921.
1. India	172	+353
2. Ajmer-Merwara	386	+1,313
3. Andamans & Nicobars	31	+168
4. Assam	107	+175
5. Baluchistan	195	—577
6. Bengal	73	+91
7. Bihar and Orissa	126	+508
8. Bombay (including Aden).	178	+370
9. Burma	189	+217
10. Central Provinces and Berar.	262	+310
11. Coorg	61	+1,370
12. Delhi	103	—2
13. Madras	111	+344
14. N.-W. F. P.	102	—298
15. Punjab	245	+136
16. United Provinces	291	+1,214
17. Baroda	329	+391
18. Central India	206	+479
19. Cochin	132	+150
20. Gwalior	182	+83
21. Hyderabad	87	—337
22. Jammu and Kashmir.	156	+272
23. Mysore	100	+236
24. Rajputana	282	+855
25. Sikkim	24	—4
26. Travancore	63	+139
27. Western India States	395	*

*For purposes of calculating variation this unit has been combined with Bombay of which it formed part in 1921.

extremes as Bharatpur and Sirohi.....Blindness is not marked by a high ratio in the hot and dry states in the west of the agency where it might be expected to prevail". This the Census Superintendent suggests may be due to faulty enumeration. Again in Bihar and Orissa, though south Bihar conforms to the environmental criterion, north Bihar, just as dusty, returns little more blindness than Orissa and Chota Nagpur, which are comparatively green and wooded, while the extraordinary fluctuations of the number of the blind, 107 per 100,000 in 1911, 82 in 1921 and 126 in 1931 make the returns suspect. On the other hand in Hyderabad State blindness is much more prevalent in Marathwara with a greater intensity of heat, glare and dust-laden winds than in the Telingana. "Black cotton soil" says the Census Commissioner of that state "is highly prejudicial to the eyesight". Cochin State shows a similar fluctuation to that of Bihar and Orissa, but a generally increased ratio, while Travancore shows, as in 1921, a higher ratio of blindness among males than among females, but greater increase among the latter. The Census Commissioner for that state adds "The evil of defective eyesight is evidently increasing among young adults, especially students in the higher forms of English schools and in colleges. The Government of Travancore have realised the seriousness of this evil and arranged for the periodical medical inspection of the students". This consideration has possibly





something to do with the curve by age groups, which shows juvenile blindness as rather a male than a female phenomenon, even though concealment may account for the depression of the female curve at 15-20, the marriageable age; the steadier increase for females, which is characteristic of Indian returns of blindness in general, is usually put down to their task of cooking over smoky fires. Apart from the greater incidence of juvenile blindness in males the two curves show, like the curves of deaf-muteness, a striking similarity of outline which suggests the possibility of a greater accuracy of the census figures than we have claimed for them in this chapter. Cataract and glaucoma are causes of much blindness which only appear with increasing age, but glaucoma heads the Public Health Commissioner's list (1929) of the main causes of blindness in India, *opthalmia neonatorum*, small-pox, conjunctivitis, and trachoma following in that order, after which are put 'neglect of simple diseases of the eyes in childhood' and 'dust and glare especially in the dry zone'. To these are added 'eye-strain under bad lighting conditions' and the medicaments of quacks. In this connection the Census Superintendent of Madras notes that—

"The general knowledge that cataract can be treated surgically has an unfortunate illustration in the prevalence of the operation known as 'couching'. This is a practice of vaids and hakims of merely pushing into deeper parts of the eye, the cloud or 'flower' which constitutes the cataract. There it may, and frequently does, cause much injury even though it can no longer be seen. European surgical practice is to remove the cloud altogether. Careful investigations made at the Ophthalmic Hospital, Madras, showed that out of 836 persons whose cataract had been couched only 176 had retained useful sight. The success return from proper surgical practice, on the other hand, is 90 per cent. and even of the remaining 10 per cent. most derive benefit from the operation. Here again propaganda is the only remedy and this point is dealt with among others in the literature issued by medical officers in Madras".

A Blind Relief Association, now known as the All-India Blind Relief Association, was founded in Bombay in 1919, and is now affiliated to the International Association for the Prevention of Blindness. It aims in particular at conveying relief and prevention into rural areas in different parts of India where treatment is generally inaccessible. Much of the blindness in India is curable and more is preventible. One serious difficulty is the economic one. Cultivators suffering from eye complaints cannot afford to leave the work on their fields for a prolonged stay in hospital either for themselves or to look after their children there. Consequently proper treatment is only obtained, if at all, too late to be of value, while affections of the eyes are often made worse by the improper treatment of local quacks. No apology is needed for quoting again and at length the Census Superintendent of Madras :—

"The chief tragedy of blindness is that so much of it in India (probably more than half) is preventable and that the majority of incurably or partially blind become so when infants or young children. We are apt to dwell too much on cataract and the more spectacular manifestations of blindness and forget the large share which parental folly and neglect, improper food and housing play in producing the 50,000 blind recorded in this presidency. Blindness from cataract despite the large number of cases is of less real importance in the life of the community, is generally associated with advanced years and is curable. Even if no cure is effected the victim has had during the useful stages of his life the power of sight. Opthalmia neonatorum, syphilis, small-pox, keratomalacia, on the other hand, as causes of blindness all mark their victims before adult years are reached and the loss and burden they bring on the community are difficult to assess. In the first two the fault of the parents is complete. It is their disease which appears as blindness in their child and if all parents established their own soundness before begetting children blindness of this sort would vanish. Ophthalmia neonatorum is in any case preventable after birth by a simple precaution which every woman ought to know but which many, including 'dais', unfortunately do not. Indeed it has frequently been discovered that a fully qualified doctor or midwife had been present at the birth of a child subsequently produced for treatment of this affliction. Blindness from small-pox is simply neglected vaccination and parental responsibility runs high. It is higher still when we consider the blindness caused by violent irritants put into the eyes to rouse the child or cure some simple ailment. Chewed red pepper, tobacco juice, red-hot coals, strong solution of alum all seem preposterous to Western ears, but all are frequently put into the eyes of Indian children with generally the tragic result of blindness. The application of irritants is probably at least as great a cause of blindness in India as ophthalmia neonatorum. Misfortune comes to all, but there is something peculiarly tragic, about misfortune occasioned by another's folly.

Keratomalacia and trachoma come in a different category and the latter is a disease of adults as well as children. Its precise cause is not yet known but it is usually associated with bad housing and ventilation. In the opinion of Colonel Wright trachoma is not in India nearly so serious a cause of blindness as in other parts of the world. This may reflect the fact that the Indian house is often much more a receptacle than a dwelling in the European sense and much of the occupants' day is actually spent in the open air.

Keratomalacia is in the opinion of Colonel Wright the greatest single cause of preventable blindness in India. This is not generally recognized. In Madras blindness is a more common sequel to it than to ophthalmia neonatorum. It is really a multiple-deficiency complex in which ophthalmic features, however noteworthy, are but localized signs. Its chief primary aetiological factor is apparently lack of fat-soluble vitamin A in the diet, and its prevention lies in proper feeding of children. It is thus linked by cause to the wide range of ailments that begin in malnutrition and it is a significant pendant to McCarrison's views on the merits of India's various diets that whereas keratomalacia is common in the rice-eating south and the Ganges valley it is practically unknown in the wheat and milk consuming Punjab. A large proportion of the poorer population of this presidency is in what McCarrison would call the twilight zone of nutrition where a small change in dietary may precipitate a deficiency disease. Colonel Wright brought to notice in 1925 a sudden precipitation of keratomalacia in adults who had acquired liver disease.

The mode of operation against these preventable causes of blindness is more obvious in some cases than in others but in all propaganda plays a large part. This has been realized and for some years past much has been done by oral and pictorial exhortation to make more widely known what the public should do to reduce or remove preventable blindness. Keratomalacia presents a difficult problem and is not separable from the very much wider economic problem represented by the low standard of living and unsatisfactory dietary prevailing in so large a part of the population. Its prevention is in fact primarily an economic question. The same apparently applies to trachoma. The above causes of blindness which operate so heavily in the first five years of life have a profound influence on the actual total number of blind persons and if they were reduced to proper proportions the blindness diagram would undergo a marked alteration."

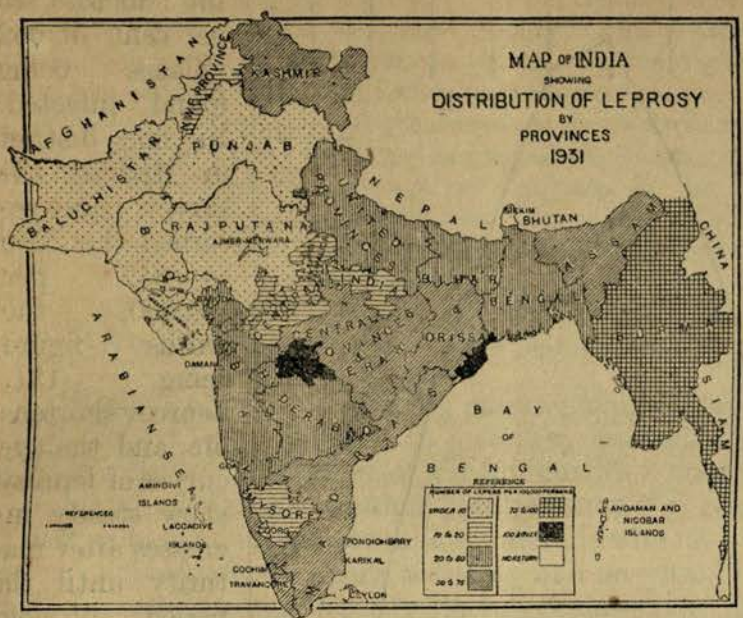
109. Were it not for their inaccuracy the figures of leprosy would be the most important of the returns of infirmity made at the census. It is, however, an unsuitable subject for diagnosis by enumerators and it is also one in which concealment is likely to be particularly obstinate. This is reflected in all probability in the great excess returned of male over female lepers, for though it is stated by some authorities that the male is more exposed to this disease, and though it is clear that this is true in the sense that he is the more likely to contract it away from home, it seems equally probable that the male, who so contracts it, is on the whole a more likely source of contagion to the women of the household he lives in than the exterior source from which he obtained it was for him. The difference in the incidence of this disease on the two sexes is therefore to be regarded as most suspicious in itself, and the more so in that concealment in the case of women is so easy under the purdah system as to be almost certain in probably the majority of cases of female lepers. The same factor must be taken into account in regard to the expert surveys of leprosy, for here too the tendency must be for more females than males to escape observation. As regards the sex incidence in Bihar and Orissa the Census Superintendent writes "doubtless ..... men are more liable to develop this disease than women are, but the extent to which this is true bears no relation to the disproportion exhibited by the census figures, which can only be due to systematic concealment." Other Census Superintendents

Census figures of leprosy, 1931.

Province, State or Agency.	No. of lepers per 100,000 of population.	Variation per 100,000 of increase since 1921.
1. India	42	+132
2. Ajmer-Merwara	3	+8
3. Andamans and Nicobars	7	—926
4. Assam	59	+76
5. Baluchiatan	6	—80
6. Bengal	42	+154
7. Bihar and Orissa	54	+241
8. Bombay (including Aden)	41	+34
9. Burma	76	+92
10. Central Provinces and Berar.	70	+223
11. Coorg	10	+1,761
12. Delhi	1	—1
13. Madras	71	+399
14. N.-W. F. P.	10	+22
15. Punjab	10	+1
16. United Provinces	30	+69
17. Baroda	24	+7
18. Central India	16	+21
19. Cochin	62	+123
20. Gwalior	12	+2
21. Hyderabad	26	—24
22. Jammu and Kashmir.	62	+140
23. Mysore	11	+72
24. Rajputana	5	+10
25. Sikkim	6	—14
26. Travancore	55	+67
27. Western India States	4	*

*For purposes of calculating variation this unit has been combined with Bombay of which it formed part in 1921.

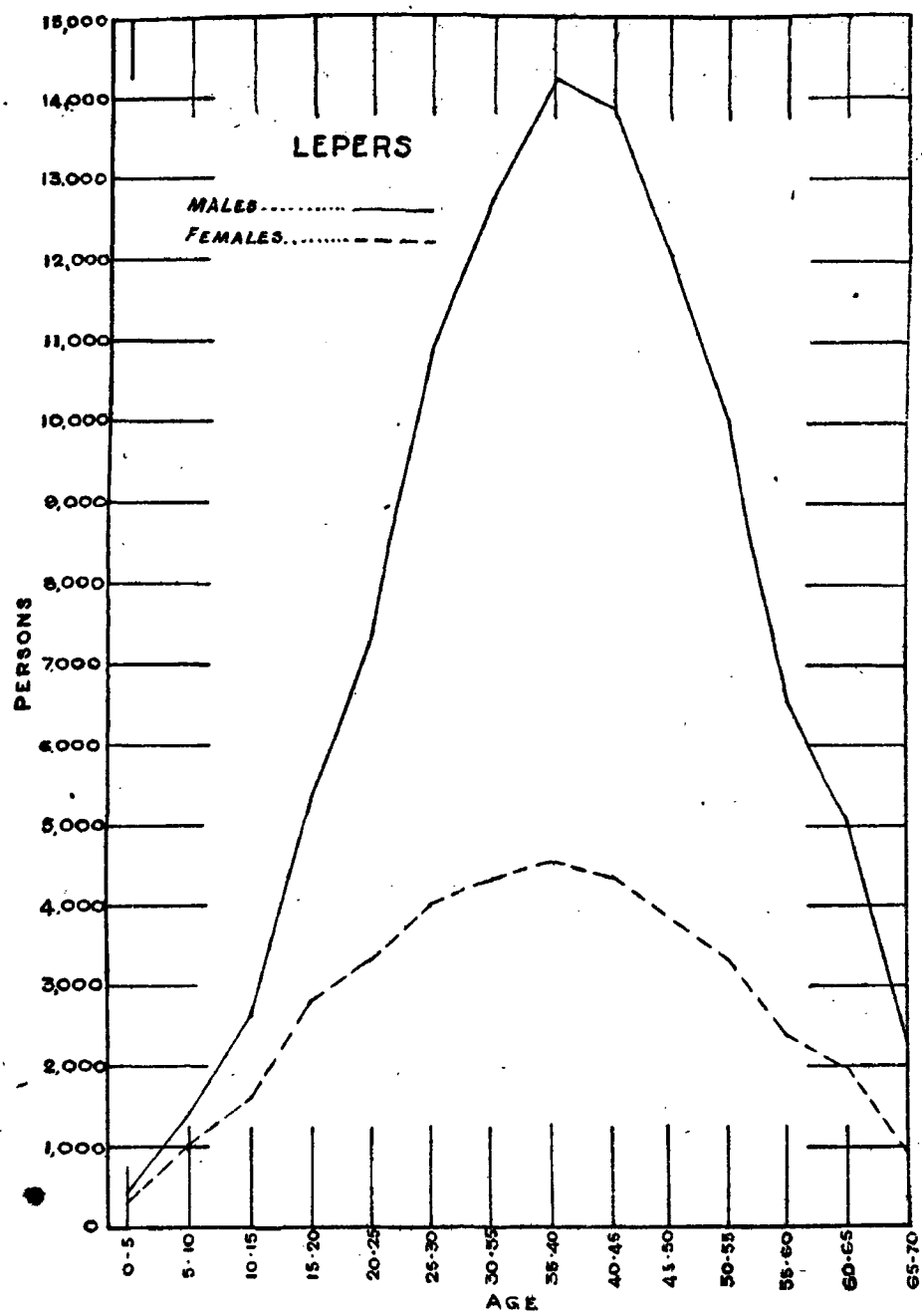
take the same view. It is perhaps significant in regard to the true sex incidence of leprosy that in Hyderabad State among the few Christian lepers found there were almost as many women as men. The census figures are mainly important as an indication of distribution. On the day after the 1921 census Dr. Muir asked 30 lepers, who knew that they were lepers, if they had been returned as such and found that only two had been so returned. The census figures have also been used to estimate the actual number of lepers by computing a figure for the whole of India on the basis of the ratio found to exist in limited areas between the census figures and the numbers obtained by expert survey. This method is also liable to be highly erroneous on account of the very great variations shown in the ratio of census to expert survey returns for different areas. The figures resulting from survey are always higher than the census figures* but the difference seems generally to vary from about 10 times the census figure downwards over large units. In very small units the excess is sometimes much greater, and a municipality in Malda district (Bengal), that of English Bazar, had a census figure of 3 and a survey figure of 67. On the other hand the Census Superintendent for Bombay regards the inaccuracy of return as varying according to the incidence of the disease. He writes—



> "The leprosy returns in the Bombay Presidency vary in accuracy probably from within two-thirds to one-tenth of the truth, the accuracy depending more than anything on the incidence of the disease in particular areas. Where the disease is widely prevalent it is not properly reported. Where it is only occasionally found there is no doubt the Census statistics are nearer the truth. In the Ahmednagar district the medical authorities believe that the Census statistics of leprosy are about two-thirds correct. In Bombay City the statistics are believed not to be more than one-tenth correct".

The 10 to 1 ratio is possibly the commoner; in one thana of Bengal a survey figure of 274 was returned against a census figure of 30, though three or four times the census figure seems more usual in that province, and in a taluk of Hyderabad State 538 against 53, but Dr. Lowe estimates the total number of lepers in the Nizam's Dominions as 60,000 against a census figure of 3,738. The Census Commissioner of that State describes the 1891 leprosy return of 10,508 as a "glaring error in enumeration", though it would seem to have been much nearer the numerical truth than the subsequent ones. His aspersions are perhaps justified by the unusual sex incidence—males 2,598, females 7,910, such an antithesis to all other Indian returns as to suggest an error in compilation or printing. Surveys over larger units show a smaller excess than 10 to 1, but it seems not unlikely that the larger the unit the less close the survey. In Ajmer-Merwara the census return is 18 lepers only, but 30 persons were actually treated for leprosy in 1930. In Assam the leprosy survey found 11,720 lepers in five districts which returned only 3,843 at the census—less than one-third, and the Census Superintendent estimates that there are at the very least 20,000 lepers in Assam. His census figure is 5,420. In Bihar and Orissa the census returns for 450 odd villages occupying 328 square miles in Puri district, 72 per cent. of which were found to be infected, gave 179 lepers per 100,000 against 1,344 found by the survey—eight times as many, and in Muzaffarpur district 374 cases were returned against

* A solitary instance to the contrary is reported from Ganjam where a leprosy survey yielded less than a fourth of the census return. Not unnaturally the survey figure is suspect.



2,455 found by the doctors, 75 per cent. of 652 villages being found infected. In one district in Madras the survey party returned the ratio as 852 per 100,000, the census figure being 131. Leprosy shortens life, and the age curves of leprosy show steady increases after maturity until the period of old age is approached when they fall rapidly. The peak is later than that in the curve for insanity and corresponds in both sexes. Otherwise the leprosy and insanity curves are not dissimilar, particularly in the marked difference between the sexes in the numbers of their afflicted.

As regards circumstances contributing to the prevalence of leprosy the Public Health Commissioner (1929) states that a high leprosy rate is associated with a poor soil where vegetables and fodder do not thrive and where the cereal crops are apt to fail; with the inadequate consumption of vegetables and milk, and with the consumption of food of bad quality such as spoiled rice and rotten fish. It is of interest to compare conclusions formed by Dr. Mayer in Nigeria. Apart from certain factors of purely local significance, he mentions poor food conditions (smoke-dried fish is excessively popular), over-crowding of houses and prolonged periods of drought and frequent famines as having increased susceptibility to the disease on account of resultant starvation and dirtiness of clothing. He mentions as predisposing diseases scabies, intimately connected with leprosy, malaria, yaws, syphilis, ankylostomiasis, dracontiasis and one or two others "because of their tendency to cause long periods of poor health, which is well known to favour infection, the development of a latent infection and to increase the severity of established leprosy. .... Malaria, yaws and syphilis may be considered as the most common predisposing causes of leprosy in Nigeria". One or other of all the diseases here mentioned as well as, it may be added, *kala-azar* may be found alongside leprosy in this country, and pyorrhœa is regarded by some as another serious contributor. Ignorance of the danger of contamination is an important factor in the spread of the disease, and the attitude of the Indian village is very different from that of the Nigerian Yoruba tribe which cures lepers dead with a drastic remedy of cold steel. This ignorance or indifference to the

disease is well illustrated by the Census Superintendent for Madras :—

"The survey parties found that a number of male patients attributed their infection to contact with leprous paramours or concubines. Apparently young women rejected on account of leprosy as unfit for marriage are allowed to have other connections. The part played by such activities in the spread of the disease needs no stressing. In South Arcot one man with highly infectious leprosy was found undergoing the preliminary ceremonies of marriage. With the aid of the villagers the marriage was postponed for six months, an encouraging instance of communal action for the public weal. One village in Salem district has a number of male lepers to whom infection was conveyed through the ministerations of a leper barber..... In another village an actively infectious leprosy case was found sharing a hooka with the other men of the village; this illustrates well the part played by ignorance in the spread of the disease. Leprosy is easily conveyed if the skin is already abraded."

Oldrieve notes the following cases, among others, of observed lepers from one small district :—A scullion at a railway refreshment room; another in a missionary's house; a preparer of oil for curries; another such; a ghi-seller's wife; a woman milk-seller; another milk-woman; a vegetable seller; a sweetmeat maker; a baker; a cigarette-maker; and his wife; a stitcher of leaves for wrapping food; a sub-assistant surgeon working in a hospital! The Census Superintendent of Madras remarks that leprosy like tuberculosis is a 'disease of semi-civilization' :—

"It is in the contact zones that these diseases have their widest range. Where a primitive mode of life is in contact with a more advanced, where simple habits have been modified but adaptation is not complete, leprosy finds a wide field. Coolies and factory hands provide the bulk of the specimens. In these cases a new mode of life is in most obvious impingement upon a simpler predecessor."

Similarly it is observed in Nigeria that tribes which have recently taken to clothing as a result of contact between Muslims in the north and Europeans in the south are at a stage in which they are more liable to acquire leprosy. The reason given is that they wear clothing but do not wash it, having forsaken the healthy nakedness of their forefathers to adopt foreign fashions of clothing without the necessary corollary of soap and water and changes of raiment. That the spread of leprosy can be unexpectedly rapid is shown by the records of a case in East Prussia where from a single importation 50 lepers were found to have been infected in the course of 30 years. It may be added that in many, possibly in all parts of India a leper's body is not burned but buried or cast into water. It is perhaps improbable that infection is ever thus conveyed but it seems a pity that cremation is not employed.

Apart from the leprosy centre at the School of Tropical Medicine the two most important bodies engaged in the anti-leprosy campaign in India are the British Empire Leprosy Relief Association (Indian Council) and the Mission to Lepers. The marginal statement shows the number of lepers treated in medical institutions in British India in 1929. In Hyderabad State the Leprosy Hospital has been over-crowded since 1926 and at least 1,000 patients were refused admission in consequence. In 1930 alone 260 patients were refused admission. Anti-leprosy campaigns have been in progress throughout India during at any rate the latter half of the decade. Thus in the Chhattisgarh Division of the Central Provinces "Propaganda-Treatment-Survey Units" moved from thana to thana and made surveys, gave lectures with the help of lanterns, and opened 32 treatment centres. Bihar and Orissa has six asylums, 2 colonies and 28 clinics for the treatment of out-patients. Of 6,393 persons examined in Puri in 1929, 288 were found to be lepers, a rate of 4,500 per 100,000. Tangi Thana and other places yielded rates of 1,133, 1,236 and 923 per 100,000. Puri is a malarial district and also attracts lepers since devotions at the shrine of Jagannath were held to be a cure, so that the growth of an endemic area there has been doubly favoured. Assam initiated a survey in 1925 which continued till lack of funds brought it to a close in 1928 during which time 5 districts had been surveyed and 11,720 lepers diagnosed at a cost of Rs. 1,00,154. In addition to the existing three small leper asylums two small colonies were opened at Tura and Dhubri. There are at present 81 clinics and it is proposed to make every

Lepers treated in institutions, 1929.

Assam ..	991	Delhi ..	116
Baluchistan ..	11	Madras ..	17,552
Bengal ..	3,923	N. W. F. P.	15
Bihar and Orissa	9,451	Punjab ..	209
Bombay ..	3,223	United Provinces.	5,279
Burma ..	3,083		
Central Provinces. ..	2,720		

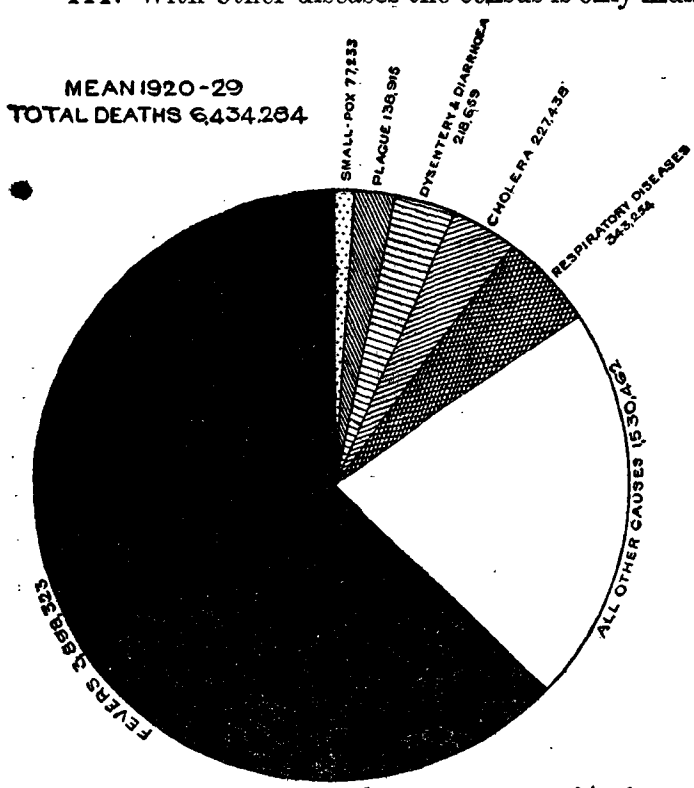
kala-azar dispensary and out-centre a leprosy clinic as well which should raise the number to 237. Lepers treated in 1930 numbered 1,898. In the Punjab there are four leprosy Hospitals managed by the Mission to Lepers in the East assisted by a Government grant; special surgeons have been trained in diagnosis and treatment, surveys are in progress, and propaganda is carried on by means of the distribution of pamphlets and of lantern lectures. In Madras there has been a rough survey which detected 48,000 cases and the expert estimate puts the real total at 100,000. Out of 1,097 schoolboys examined at Villupuram in South Arcot 3·67% were found to be infected, and in East Godavari 5% of factory hands. An organised campaign has been undertaken by dividing the province into six areas with an expert medical officer in charge of each whose efforts are directed to the opening of clinics and to the dissemination of propaganda knowledge as well as to the treatment of active cases. There is no compulsory segregation or detention but the object is to treat the infectious rather than to offer asylums to burnt out cases which, though no longer infectious, form the majority of lepers recognizable as such by laymen.

Elephantiasis.

110. The only other infirmity made a subject of census returns was elephantiasis, which was recorded in Travancore State. This disease is said to be easy to recognize, but the Census Commissioner of the State reports that concealment is undoubtedly practised, as in Trivandrum itself 3,268 persons out of 31,021 who were tested for the disease gave positive results to microscopic examination for filarial disease. Of the 3,268 who proved to have filaria in their blood 533 actually suffered from elephantiasis of the hand or foot. But only 180 persons in the town out of 96,016 were returned as suffering from elephantiasis at the census. The total population afflicted in Travancore according to the returns is 14,709, that is 288 per 100,000 the proportion of females being returned as 746 per 1,000 males, the difference being more likely to be due to concealment than to spiteful discrimination in favour of her own sex by the mosquito that carries the parasite.

Other diseases.

111. With other diseases the census is only indirectly concerned on account of their effect on population figures, and of their predisposing influence, where it exists, to infirmities recorded. The accompanying diagram taken from the Public Health Commissioner's Report for 1929 shows the mean of mortality for the years 1920-29 as distributed between fevers, respiratory diseases, cholera, dysentery and diarrhœa, plague, small-pox and others. Considerably more than half the total deaths from all causes are due to fevers. Anti-malarial work is carried on in all provinces. Kala-azar, which has depopulated whole valleys in Assam and for which the mortality rate was over 90% has been defeated during the decade by the discovery of its treatment with antimony salts, and there are now 90% of recoveries. Of respiratory diseases tuberculosis is a serious problem in India particularly in thickly populated areas and it is probably more prevalent than figures indicate. It has been pointed out that Indian students in Europe very frequently contract tuberculosis. King George's Thanksgiving Fund, with a capital of over 9½ lakhs raised by public subscription, aims at the prevention of tuberculosis by educational measures, and at a survey of the prevalence of the disease. Mortality from tuberculosis has been reduced by over 50% in western countries and could undoubtedly be similarly reduced in India. 200 000 cases were treated in hospitals in 1929. Cholera was less than



usual during the decade and is regarded as decreasing, but slowly. Pilgrimages are important distributors, and the great Kumbh mela of 1930 at Allahabad proved to be followed, as anticipated, by a year of high epidemicity. Plague has similarly been greatly reduced during the decade. Mortality from plague in the Punjab was higher in 1924 than in any year since 1907, when it was considerably more than twice the 1924 figure, and it was also above normal in 1926. The United Provinces figure for 1923-26 exceeded those of 1915 and 1916, but has not reached the mortality of any other year in the previous decade, and the other provinces have all shown a generally corresponding improvement. 1921, 1922, 1927, 1928 and 1929 were all years of exceptionally low plague mortality, and the figure for 1930 has been lower than for any year since plague came to India through Bombay. Probably the rats of India are developing immunity, as the extent to which they appear to be immune is greatest where plague has been worst. On the other hand Assam and in a lesser degree Bengal and Burma are free from plague though their rat population is reported to be highly susceptible. This freedom has not been satisfactorily explained. Karachi, India's chief port for the export of grain has been free from plague since 1926. Mortality from small-pox was slightly less for 1921-1929 than for the corresponding 9 years of the previous decade, but India remains the greatest centre of small-pox in the world. Some 600,000 cases of venereal disease are treated annually in hospitals but no other statistics of these diseases are available. Beri-beri is endemic round the western stores of the Bay of Bengal, the centre of the focus of infection lying round about Masulipatam towards the north of the Coromandel Coast. The disease is seasonal, prevailing during the later part of the monsoon, and is commonest in communities living on raw-milled and-polished rice, and as might be expected outbreaks occur in small communities living under special conditions, such as felling camps in forests, or military police outposts—obviously among persons living on milled rice supplied as rations. In 22,000 cases treated in 1929 there were 300 deaths. Of other diseases ankylostomiasis (hookworm), dracontiasis (guineaworm) and yaws are of some importance. Hookworm disease, in spite of a fairly widespread incidence of the parasite, is virtually non-existent in the greater part of India. Thus the North-West Frontier Province, Kashmir, Sind, the Punjab and Rajputana are for all practical purposes entirely free, and though in the eastern parts of the two last there is a fairly high incidence of very light infections, "infections severe enough to be of pathogenic significance are practically unknown". Similarly the Deccan and western India generally, as well as Mysore, are free for practical purposes, as also Central India and the greater part of the Central Provinces. In the eastern provinces and in Madras, where infection is appreciably more prevalent, the infection is in most places so slight as to be negligible except in certain localities. The seriously infected areas may be regarded as confined to the intermediate zone in the plains of Burma (between the delta and the dry zone, that is), the Brahmaputra and Surma valleys in Assam, the Duars and Darjiling district in Bengal, in Madras the west coast and the east coast from Tanjore to Nellore, and the State of Travancore. Cases treated in hospitals in 1929 were by far the heaviest in Madras (104,542) where 266,000 treatments were issued to the general population and an intensive educational propaganda by motion pictures, lantern lectures, pamphlets, etc., was instituted; 58,000 egg-counts were carried out and the infection average for the Presidency was found to be 73%. Control has proved to be a matter of the control of soil pollution. In Travancore a survey was conducted in 1930. Out of 27,791 examinations made 25,714 positive cases were found with an average egg-count of 1,400 per c.c.; 87 to 93% of positive cases were found among persons tested in various parts of the State. The incidence of the disease was found to be highest among Government servants, and during the course of a six month's campaign 71,285 persons were treated. It is not generally understood how great the economic effect of this disease, not merely in respect of poor outturn and lethargic work, but in the creation of large numbers who are in fact parasitic on their less infected fellows. Hookworm produces habitual criminals and village pests of the petty pilfering order and probably innumerable beggars, and the writer when in charge of one of the smallest jails in India (one of the few still controlled by the district magistrate) found by deliberate experiment that habitual pilferers and village parasites could by being tested for hookworm and by treatment in jail be made into useful members of their communities. Guineaworm is reported to be

prevalent to a varying extent in several districts in Madras. Yaws is very prevalent in the Chin Hills and the Upper Chindwin district and in some other parts of Burma including Mergui, in the Assam hills, in the Nicobar Islands, in Bastar State, in the Chanda and Chhattisgarh uplands of the Central Provinces and in the Agency tracts and on the Malabar coast of Madras. The distribution of yaws, which is common in Africa and in Melanesia appears to be more or less racial, and is possibly connected in India with Melanesian race elements. As in Nigeria, and like hookworm and guineaworm, it probably predisposes to leprosy. It is likely that in the past, and even in the present, cases of yaws have been frequently diagnosed as syphilis. Fortunately it is susceptible to the same treatment. For detailed information as to the prevalence of and mortality from various diseases in India reference should be made to the Annual Reports of the Public Health Commissioner with the Government of India. Figures of death from certain diseases will be found in Subsidiary Table XI to Chapter I (p. 39).

SUBSIDIARY TABLE I.

Distribution of 10,000 of each sex of the Infirm by Age.

Age.	Insane.										Deaf-Mutes.									
	Males.					Females.					Males.					Females.				
	1931.	1921.	1911.	1901.	1891.	1931.	1921.	1911.	1901.	1891.	1931.	1921.	1911.	1901.	1891.	1931.	1921.	1911.	1901.	1891.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
Total	**10,000**	**10,000**	**10,000**	**10,000**	**10,000**	**10,000**	**10,000**	**10,000**	**10,000**	**10,000**	**10,000**	**10,000**	**10,000**	**10,000**	**10,000**	**10,000**	**10,000**	**10,000**	**10,000**	**10,000**
0—5	145	121	102	150	170	180	142	139	196	183	502	313	403	410	453	596	387	469	486	532
5—10	559	539	547	582	588	577	553	568	633	567	1,317	1,284	1,458	1,484	1,420	1,314	1,313	1,446	1,548	1,439
10—15	739	761	833	921	820	783	803	876	954	820	1,382	1,373	1,529	1,621	1,310	1,340	1,332	1,454	1,525	1,152
15—20	946	810	940	928	945	999	904	1,028	1,013	967	1,101	1,042	1,217	1,270	1,078	1,071	1,004	1,223	1,211	1,029
20—25	1,088	1,024	1,118	1,027	1,054	1,049	993	1,095	1,012	1,011	1,072	972	1,142	999	969	1,027	961	1,143	976	953
25—30	1,263	1,273	1,270	1,217	1,232	1,087	1,053	1,013	968	990	917	987	1,049	982	899	889	883	975	888	862
30—35	1,257	1,342	1,316	1,232	1,263	1,053	1,131	1,126	1,103	1,103	805	886	877	858	824	776	847	861	870	803
35—40	1,087	1,049	976	989	953	989	867	790	798	863	641	648	570	545	605	609	573	529	501	548
40—45	918	987	960	962	986	910	1,025	996	1,001	971	550	620	576	580	623	536	664	611	590	630
45—50	644	618	574	572	560	712	634	571	537	592	432	398	309	317	379	426	383	302	313	366
50—55	495	581	558	576	563	576	733	706	665	719	353	429	333	347	456	361	479	369	397	485
55—60	313	272	239	246	278	399	305	297	274	317	272	228	136	139	246	300	229	140	149	250
60 and over	546	623	567	598	588	686	857	795	846	897	656	819	401	448	738	755	945	478	546	951

Age.	Blind.										Lepers.									
	Males.					Females.					Males.					Females.				
	1931.	1921.	1911.	1901.	1891.	1931.	1921.	1911.	1901.	1891.	1931.	1921.	1911.	1901.	1891.	1931.	1921.	1911.	1901.	1891.
1	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
Total	**10,000**	**10,000**	**10,000**	**10,000**	**10,000**	**10,000**	**10,000**	**10,000**	**10,000**	**10,000**	**10,000**	**10,000**	**10,000**	**10,000**	**10,000**	**10,000**	**10,000**	**10,000**	**10,000**	**10,000**
0—5	297	265	317	303	411	203	201	226	211	278	40	58	30	46	45	91	101	67	100	92
5—10	474	549	557	585	648	290	357	360	385	415	137	119	70	108	89	259	203	150	206	196
10—15	506	581	599	692	648	307	342	366	448	411	242	257	209	271	240	400	448	408	456	421
15—20	471	464	541	575	588	313	301	376	410	409	495	422	381	418	406	705	629	647	662	625
20—25	501	480	604	601	607	350	361	457	458	449	675	612	587	581	586	829	767	835	781	735
25—30	505	546	646	665	632	418	433	510	520	517	1,008	897	886	911	877	992	960	946	926	926
30—35	502	600	687	696	662	457	547	646	641	620	1,183	1,174	1,176	1,220	1,202	1,081	1,159	1,186	1,146	1,188
35—40	569	531	546	541	560	581	507	507	506	535	1,319	1,195	1,206	1,159	1,209	1,147	999	980	930	998
40—45	610	693	775	754	698	636	756	831	822	753	1,286	1,426	1,561	1,514	1,522	1,094	1,299	1,268	1,291	1,296
45—50	734	571	538	519	564	812	597	549	522	584	1,120	1,023	1,050	980	998	973	844	803	752	776
50—55	753	904	915	866	749	846	1,038	1,075	1,027	888	930	1,129	1,189	1,187	1,163	837	983	1,079	1,081	991
55—60	910	535	442	453	623	1,108	629	487	487	697	609	520	491	483	493	601	447	449	420	457
60 and over	3,168	3,281	2,833	2,750	2,160	3,679	3,931	3,610	3,563	3,444	956	1,168	1,164	1,122	1,170	991	1,161	1,182	1,249	1,299

NOTE.—In this table, those infirm whose age was not specified, have been left out of account.

SUBSIDIARY

Number of persons afflicted per 100,000 of the population

Province, State or Agency.	Insane.										Deaf-Mutes.							
	Males.					Females.					Males.					Females.		
	1931.	1921.	1911.	1901.	1891.	1931.	1921.	1911.	1901.	1891.	1931.	1921.	1911.	1901.	1891.	1931.	1921.	1911.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
INDIA ..	**41**	**33**	**31**	**28**	**33**	**27**	**22**	**20**	**17**	**21**	**76**	**70**	**74**	**62**	**86**	**55**	**49**	**53**
Provinces ..	**43**	**35**	**33**	**30**	**34**	**29**	**23**	**21**	**19**	**22**	**81**	**74**	**80**	**67**	**94**	**58**	**51**	**56**
1. Ajmer-Merwara ..	49	22	25	24	22	27	15	12	4	9	88	32	23	29	39	56	23	9
2. Assam	65	57	51	47	62	52	45	37	35	48	82	78	87	87	95	68	60	66
3. Baluchistan ..	60	62	57	..	..	33	40	28	..	..	81	107	103	..	..	49	56	50
4. Bengal	49	47	50	50	58	38	35	36	35	44	81	79	81	72	102	58	55	58
5. Bihar and Orissa ..	28	14	16	17	20	15	7	8	9	10	77	66	90	95	139	49	40	55
6. Bombay (including Aden).	59	52	37	24	38	36	31	20	13	23	93	63	73	43	72	61	46	49
7. Burma	98	93	85	61	98	77	82	74	45	83	122	96	77	33	55	109	84	65
8. Central Provinces and Berar.	35	28	19	18	20	21	17	11	9	12	92	104	54	54	51	63	72	39
9. Coorg	14	10	11	16	26	25	8	10	20	25	61	13	42	59	80	63	11	59
10. Delhi	16	18	..	..	..	11	12	..	..	..	28	32	..	..	..	16	32	..
11. Madras	39	24	24	23	25	27	17	17	15	18	81	58	87	74	87	62	44	68
12. North-West Frontier Province.	41	47	54	37	41	18	25	25	21	24	82	97	113	100	109	47	69	75
13. Punjab (including Agency).	36	35	31*	43*	36*	21	20	20*	26*	21*	79	106	95*	91*	115*	56	72	70*
14. United Provinces of Agra and Oudh.	29	21	23	19	16	17	11	12	10	8	61	60	67	46	88	41	39	45
States and Agencies ..	**32**	**24**	**22**	**14**	**26**	**21**	**16**	**14**	**9**	**16**	**57**	**50**	**45**	**33**	**52**	**42**	**36**	**33**
15. Baroda State ..	65	54	30	15	43	47	39	21	9	27	55	34	29	41	45	48	22	13
16. Central India Agency	28	16	10	5	..	18	11	6	2	..	32	35	27	19	..	25	23	19
17. Gwalior State ..	16	18				10	10				40	52				34	35	
18. Cochin State ..	61	44	34	27	32	45	34	30	23	27	48	57	39	77	66	33	47	33
19. Hyderabad State ..	18	23	23	4	18	12	17	15	2	10	30	31	37	7	46	22	23	29
20. Jammu and Kashmir State..	49	51	48	60	..	28	27	30	37	..	180	153	107	136	..	135	122	87
21. Mysore State ..	31	17	26	21	25	23	12	20	16	19	67	70	86	62	78	53	50	68
22. Rajputana Agency ..	29	16	18	12	32	16	8	9	8	19	32	32	36	22	..	23	20	21
23. Sikkim State ..	5	22	13	46	..	4	5	7	32	..	159	200	297	355	..	139	152	233
24. Travancore State ..	45	37	20	20	19	36	27	16	14	11	69	63	34	31	34	44	45	24
25. Western† India States Agency.	59	..	..	..	..	3	..	..	..	..	101	..	..	..	..	80	..	..

* Includes Delhi.

† Separate figures for previous Censuses are not available for this unit, but the ratios in the 1921 to 1891 columns against Bombay are inclusive

TABLE II.

at each of the last five censuses.

	Blind.												Lepers.										
			Males.					Females.					Males.					Females.					
	1901.	1891.	1931.	1921.	1911.	1901.	1891.	1931.	1921.	1911.	1901.	1891.	1931.	1921.	1911.	1901.	1891.	1931.	1921.	1911.	1901.	1891.	
	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	
	42	**57**	**157**	**145**	**138**	**121**	**164**	**185**	**160**	**145**	**120**	**171**	**59**	**46**	**51**	**48**	**68**	**23**	**18**	**18**	**17**	**23**	
	45	**61**	**158**	**144**	**140**	**133**	**164**	**183**	**158**	**145**	**133**	**168**	**67**	**48**	**55**	**54**	**73**	**26**	**19**	**20**	**19**	**25**	
	16	24	327	248	248	120	181	452	283	301	125	209	4	3	3	8	7	2	2	2	3	3	1
	62	75	101	97	94	97	107	114	96	87	91	105	83	80	90	125	182	32	30	32	39	60	2
	..	..	201	252	235	..	..	187	276	260	..	..	8	18	14	..	..	3	7	5	..	..	3
	49	68	76	78	78	80	84	70	66	63	67	75	59	48	56	69	104	23	18	19	23	36	4
	56	78	121	82	111	112	122	131	82	104	104	123	79	48	71	76	82	29	17	23	24	26	5
	29	49	167	167	136	84	149	192	207	153	87	156	55	48	52	38	69	26	23	23	15	24	6
	22	47	170	168	131	105	172	209	205	150	117	229	102	98	79	56	117	49	49	37	25	52	7
	40	37	210	204	173	155	166	313	307	239	201	192	88	61	58	78	91	51	39	33	38	39	8
	56	64	64	47	47	45	49	58	69	45	63	51	12	3	6	6	13	8	7	..	4	14	9
	..	..	93	135	..	..	..	118	136	..	..	..	2	3	..	..	..	..	1	..	..	..	10
	55	65	105	87	83	91	101	116	86	79	88	104	107	56	62	54	53	35	19	20	17	18	11
	75	69	103	132	161	128	198	100	133	151	132	245	12	11	17	18	16	8	7	8	10	7	12
	66*	77*	239	259	249*	298*	343*	252	259	261*	314*	361*	13	15	17*	26*	37*	6	6	8*	11*	13*	13
	28	52	259	217	208	168	229	328	256	234	178	241	47	44	48	36	58	11	11	11	11	13	14
	23	**37**	**151**	**144**	**128**	**55**	**165**	**194**	**171**	**143**	**50**	**193**	**35**	**31**	**29**	**17**	**31**	**16**	**14**	**11**	**8**	**12**	
	28	30	246	249	129	75	161	417	395	204	95	235	31	35	31	18	2	15	16	12	10	15	15
	13	..	166 130	152 162	109	41	..	248 241	203 227	128	35	..	22 15	21 18	19	6	..	10 9	10 8	9	4	—	16 17
	60	43	129	127	133	113	133	136	128	125	107	105	94	70	73	57	66	31	25	28	25	31	18
	4	30	88	150	122	15	100	85	157	121	9	84	36	47	41	4	39	16	20	15	2	13	19
	92	..	149	142	154	115	..	165	144	152	97	..	71	60	59	72	..	38	30	26	36	..	20
	48	62	106	93	104	79	108	94	80	94	67	105	16	8	18	17	22	6	3	8	8	11	21
	15	..	234	173	185	78	272	334	230	242	79	372	6	6	9	6	21	3	2	3	3	7	22
	385	..	25	27	36	71	..	22	40	21	57	..	9	14	16	55	..	4	12	40	25	—	23
	23	24	71	49	42	42	46	55	35	29	29	33	79	73	49	68	53	30	29	16	28	22	24
	..	..	309	..	..	..	..	484	..	..	..	..	5	..	..	..	..	2	..	..	..	—	25

of the W. I. S. Agency.

SUBSIDIARY TABLE III.

Number afflicted per 100,000 persons of each Age-period and number of females afflicted per 1,000 males.

Age-period.	Number afflicted per 100,000.								Number of Females afflicted per 1,000 males.			
	Insane.		Deaf-mutes.		Blind.		Lepers.		Insane.	Deaf-mutes.	Blind.	Lepers.
	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.				
1	2	3	4	5	6	7	8	9	10	11	12	13
All ages	41	27	76	55	157	186	60	24	626	678	1,113	371
0—5	4	3	26	21	32	24	2	1	778	805	760	849
5—10	17	12	76	56	56	42	6	5	647	676	682	703
10—15	25	19	88	65	67	51	12	8	663	657	676	613
15—20	43	29	94	63	83	62	33	18	662	659	738	528
20—25	49	29	90	57	87	66	45	20	604	649	778	456
25—30	60	34	81	56	93	90	70	27	539	657	920	365
30—35	65	38	78	56	100	113	83	34	524	653	1,014	339
35—40	69	45	76	56	140	182	123	46	570	645	1,137	323
40—45	69	49	77	58	176	235	141	51	620	661	1,161	316
45—50	62	50	78	60	273	389	158	59	692	668	1,232	322
50—55	61	50	80	63	355	499	166	63	730	693	1,251	334
56—60	56	47	90	71	621	890	158	61	799	748	1,356	367
60 and over	56	45	126	99	1,257	1,636	144	56	788	780	1,293	384

CHAPTER VIII.

Occupation.

Section i—Classification and distribution.

Instructions to Enumerator.

112. Occupation is quite the most troublesome and complicated return called for on the census schedule. Four columns were devoted to this return in which the enumerator was to describe the enumerated as an earner or a dependant, and to enter in the case of an earner his principal occupation, his most important subsidiary occupation if he had any, and the industry in which he was employed. A complete compilation of figures of subsidiary occupations has been attempted at this census for the first time, and Table X gives complete details by sex for each group instead of for orders only. A dependant was not regarded as having any principal occupation but was to be recorded in the column for subsidiary occupation as following any occupation which contributed to the family maintenance. Such a dependant was distinguished as a 'working dependant' from the non-working dependants following no occupation, and in this chapter the term 'earner' is used of a wage receiver or subsistence obtainer in either principal or subsidiary occupation, and the term 'worker' is used of all such persons together with those following an occupation as working dependants, *i.e.* not themselves receiving the wage or controlling the means of subsistence gained. The term 'actual worker' is used with reference to all workers in principal and dependant occupations excluding the numbers of individuals duplicated by their appearing also as earners by means of subsidiary occupations, but in this chapter the subject is approached rather from the aspect of the total number of different means of subsistence engaging the whole working population than from the aspect of the maximum number of the actual workers occupied.

The definition of industry was employment on wages in company with any other person by a third person. This definition of course covers many non-industrial forms of employment but it was intended to eliminate these in the process of selection for compilation and to tabulate only those industries known to be of importance in any given locality. Unfortunately the imperative need for drastic economy led to the abandonment of any sort for or tabulation of industry, this particular item in the census programme being one of those selected for curtailment as the reports from most provinces suggested that the returns of industry were not entirely satisfactory owing to misunderstandings on the part of enumerators as to exactly what was wanted. They did however often prove very useful in enabling occupations to be classified.

Misunderstandings such as those affecting the return of industry are familiar in the Indian census schedule and were the cause of one of the changes in the form of the schedule made at this census. In 1911 and 1921 enumerators were instructed to return in the case of dependants the "occupation on which dependent", an instruction which always gave rise to much misunderstanding and consequently unsatisfactory results. The abandonment of this instruction means that there can be no final distribution of the dependence of the total population on the various occupations derived from the individual returns, but there is no reason to suppose that an estimate of this distribution cannot be obtained from an examination of the returns of earners and working dependants, which will be as satisfactory for practical purposes as the one obtained from the incompletely comprehended and unsatisfactory returns of occupation on which dependent obtained on previous occasions, for a change was also involved in the instructions that a dependant might be regarded as having an occupation. The former division was into workers and dependants, and the instruction was that all persons contributing to the family maintenance should be regarded as workers, so that the 'earners' *plus* 'working dependants' of 1931 are in effect equivalent to the 'workers' of 1921 with the advantage that it is, or should be, possible to distinguish between those who are actually in receipt of earnings and those who are merely helpers; thus in Cochin, for instance, the proportion of 'earners' *plus* 'working dependants' to the total population in 1931

is almost identical with the proportion that 'workers' were to it in 1921. On the other hand there was in some cases a tendency to try and interpret 'earner' in the sense attached to the word 'worker' in 1921, thus obscuring the distinction between earner and working dependant, while the figures of working dependants and others have probably been biassed here and there by a snobbish feeling that it is not so respectable for women to be working as to be non-working dependants, particularly where the observance of purdah is a mark of social superiority.

Reference to figures.

113. The figures of occupation will be found in Table X of part II, and the proportional figures in the subsidiary tables at the end of this chapter are preceded by a copy of the complete scheme of classification. In interpreting the returns the method here followed is first to attempt some examination of the distribution of occupation on broad lines, that is by classes and sub-classes involving divisions on very general lines only, and then to attempt some examination of the statistics in greater detail with reference to orders, and where necessary to individual groups, as classified in the scheme appended to this chapter. The final section consists of a brief note on occupation and caste with reference to Table XI in part II.

Workers and Dependants.

114. Instead of the proportion of non-working dependants to workers having been reduced by the new distinction between earners and working dependants, as was anticipated, the proportion of non-working dependants has increased. In 1921 out of every hundred persons 46 were workers to 54 dependants. In 1931 there were 44 workers to 56 dependents. That this is due in part, to a predilection for returning total instead of working dependence is possibly indicated by the figures for sexes engaged in agriculture, in which the number of males returned as workers has increased during the decade by nearly two million, while the number of females has so far decreased, that is by nearly five million, as to reduce the total number of agricultural workers to less than the total of 1921. The quite exceptional increase in females under head domestic service shows at once however where the bulk of these workers appears. It is certainly regarded as much more socially respectable for a wife to be engaged at home on household duties than to labour in the fields, and there is a generally increasing tendency, as castes aspire to a higher social standing, to keep their women at home. On the other hand the proportion of children to adults, and therefore of dependants to workers is unquestionably higher than it was in 1921, while it is not unlikely that part of the increase in dependence as compared with work is due to the increasing difficulty of getting employment and earning an independent livelihood, keeping youths, in the middle classes at any rate, dependent on their families whereas 10 years ago they would have been earning.

Earners and Workers.

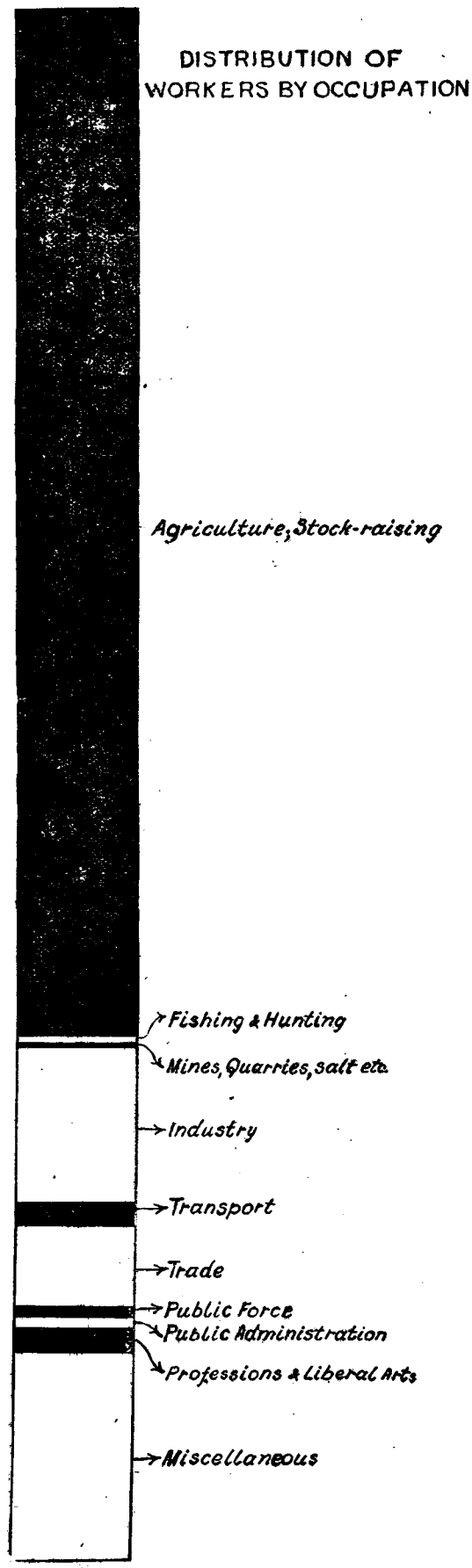
115. The proportion of earners to working dependants is about nine to two, that is of the total working population 81·4 per cent. is in direct receipt of wages or of other means of subsistence whereas the other 18·6 per cent. are helpers of the wage-earners. This statement however is to be accepted only with considerable reserve, as the practice of previous decades in which the division was merely into workers and dependants, all who contributed indirectly in the earning of wages being shown in the former category, undoubtedly influenced in practice the distinction drawn at this census between receivers of earnings and their helpers, a distinction difficult enough in any case where the nature of the occupation is such that the earnings are obtained in the form of natural products which are consumed by the producer without ever being exchanged for coin. Occupations of this sort, including as they do both agriculture and stock-rearing, at any rate to a considerable degree, probably form the great majority in India, and the instructions given were that in such cases the owner or householder should be regarded as the earner and the working members of this family as working dependants. The figures returned however indicate that the interpretation of earner has frequently been wider than was intended by the instructions given, at any rate in class A, sub-class 1. It would appear also from the returns that the instruction that the actual occupation followed should be returned by working dependants, and not the occupation of the principal earner where the two differed, has been often misunderstood. Thus it is difficult to see how the male and female working dependants returned under group 157, *Police*, can represent persons whose occupation is the preservation of the public peace or the arrest of offenders, since generally speaking police officers are appointed under special warrants

and it is an offence to impersonate them. On the other hand the numbers in this case are few, and in out of the way parts of India the most unexpected conditions are apt to prevail, and it is not inconceivable that police are to be found whose office is hereditary or an *ex-officio* accompaniment of some other post and is automatically filled by the relatives of the usual functionary when he is indisposed or engaged in other pursuits, while the term 'police' would include for census purposes persons whose services were essentially in that department though not themselves involving the alleged unhappiness of constabulary duties. The females whose principal occupation is found in this group include of course wardresses in prisons as well as policewomen. Similarly the 21 female working dependants on the Air Force are easily explicable as the wives and families of caretakers, bhistis, etc., who help the earner or deputize in his absence. Nevertheless the difficulty of obtaining correct returns of occupation as required by the census code is illustrated by the return from the remote Himalayan principality of Poonch of 40,000 odd females whose principal or subsidiary occupation was stated as 'mechanic, unspecified.' The not unnatural enquiry suggested by these remarkable figures, coming from, with the possible exception of the Amindivi Islands, about the most unlikely area within the scope of operations to produce quantities of female mechanics, resulted in their reclassification under domestic service.

116. It has already been pointed out that the returns of this census do not provide any direct figure for the distribution of the total population according to its dependence on various occupations. Such a distribution would seem to have little but academic value, but if it be considered necessary it can be inferred from an examination of the distribution of dependants at previous censuses. The marginal table shows the percentage of workers to dependants in each class and sub-class in 1911 and in 1921. The figures for 1901 are not comparable except in a few cases and in these also the percentages are given. Now if the total percentage of actual workers to non-working dependants be taken for 1931, it is found to be 44 per cent. workers to 56 per cent. dependants. Now the

Class or Sub-class in Occupation Table.	Ratio of workers to non-working dependants. According to the returns of 1911.	1921.	Assumed for 1931.
I*	47 : 53	46 : 54	44 : 56
II	58 : 42	64 : 36	62 : 38
III	50 : 50	47 : 53	45 : 55
IV†	48 : 52	45 : 55	43 : 57
V	45 : 55	44 : 56	42 : 58
VI	45 : 55	48 : 52	46 : 54
VII	37 : 63	38 : 62	36 : 64
VIII‡	42 : 58	41 : 59	39 : 61
D	57 : 43	54 : 46	44 : 56
Totals§	47 : 53	46 : 54	44 : 56

* 46 : 54 in 1901. ‡ 41 : 59 in 1901.
† 44 : 56 in 1901. § 47 : 53 in 1901.



Incidence of Dependency.

difference between this ratio and that of 1921 may be applied to all sub-classes except those in class D, where owing to the nature of the returns a large number of persons, mostly female, who were formerly classified in sub-class I, now appear in sub-class X as domestic instead of agricultural workers. This will affect the percentage of workers to dependants inferred from the 1911 and 1921 returns, and sub-class D must be calculated on a different basis. The ratio for the whole population is obviously determined by that for the agricultural portion of it and the inclusion of some 7,000,000 additional agriculturalists in class D is likely to bring that class into line with class A. In the fourth column therefore of the marginal table above will be found the ratio of dependants to workers for different sub-classes which is assumed for the purpose of the distribution of total dependence in 1931. In the table below are shown the results of the application of those ratios to the occupation returns of 1931, offered for what they are worth :—

Class or sub-class.	Occupation.	No. of workers (in lakhs).	Percentage of total workers.	No. of non-working dependants (in lakhs).	Total maintained (in lakhs).	Percentage of total population.
A, B and C.						
I	Exploitation of Animals and Vegetation.	1,033	67·1	1,315	2,348	67·0
II	Exploitation of Minerals ..	3	·2	2	5	·1
III	Industry	154	10·0	188	342	9·7
IV	Transport	23	1·5	30	53	1·5
V	Trade	79	5·1	109	188	5·4
VI	Public Force	8	·6	9	17	·5
VII	Public Administration ..	10	·7	18	28	·8
VIII	Professions and Liberal Arts.	23	1·5	36	59	1·7
D	Miscellaneous (Persons living on their income, Domestic Service, Insufficiently described and Unproductive Occupations).	205	13·3	261	466	13·3

It will be observed that the proportion of the total population maintained by the various sub-classes corresponds very closely to the proportion of workers in each of those classes, which is precisely what might be expected on *a priori* grounds, and from the figures in paragraph 86 above, which indicate that there is no very great variation according to occupation in the number of children born and that what variation there is is equalised by a survival rate which varies inversely to the number of births.

Occupational Classification.

117. Occupations were classified as in 1911 and in 1921 according to the Bertillon system, which was fully described by Sir Edward Gait in his report on the former census. The scheme has come in for a great deal of criticism at the hands of Census Superintendents and others, but none of the critics have succeeded in propounding any satisfactory alternative, and while criticisms are usually directed to the complexity and alleged excessive detail in the grouping, suggestions for improvement offered by departments of Government usually take the form of requiring much more detailed grouping than that already provided. This latter attitude results from losing sight of the fact that (to quote Sir Edward Gait) "the whole scheme, as adapted for India, is based on the axiom that a census does not supply data which are suitable for minute classification". If this axiom be not strictly observed it becomes impossible to keep down the number of detailed heads, and classification in the compilation offices would be made unconscionably slow and difficult, while the already existing degree of inaccuracy would probably be greatly enhanced. As it is the problem of sorting the occupation of each individual into his proper category is too intricate to be carried out with entire satisfaction and as it is in ability to classify correctly that Indian sorting offices are particularly deficient, it is likely that the degree of error in classification is already greater in the occupation table than that in any other. Indeed problems frequently arise in classification which offer very considerable difficulty. It is simple enough when confronted with a return of "*Bande Mataram*" as a means of subsistence to allocate the individual to

group 195, *Other unclassified non-productive industries*, probably the most fit place for him whatever he had returned, but "Professional identifying witness" is more difficult. Should he go into the same category, or should it be group 168, *Lawyers' clerks, petition writers, etc.*? The latter would probably wish to relegate him to group 157, but there is much virtue in an 'etcetera'. "Charity-receiver on burial ground" suggests mendicancy at first sight, but probably represents a Mahabrahman and would be rightly classified in group 166, *Servants in religious edifices, burial grounds, etc.*, together with "Pourer of water on gods", but one is a little puzzled as to whether "Driving away epidemics by charms" should go with "Averters of hailstorms" into group 181, *Astrologers, fortune tellers, horoscope-casters, wizards, witches and mediums*, or into group 170, *Persons (unregistered) practising the healing art*, with the leech, familiar in India with his little horns and cupping tools, who returned his occupation as "Sucking bad blood". ."Ear wax remover" should probably go into the same category, but the alternative of order 12, Industries of dress and the toilet, where the barbers are found, inevitably occurs to one, as it does in the case of "Setting gold nails in teeth", which might also be group 171, *Dentists*, or 98, *Makers of jewellery and ornaments*. "Breaking the horns of dead bullocks" is probably group 53, but one would like to know more of the eschatology of the said horns, and "Searcher of conch shells", particularly in the Central Provinces whence returned, is completely defeating. Indeed it is most suggestive as a basis of archæological as well as industrial enquiry and it can hardly be classified in group 19, *collectors of forest produce*, though it might conceivably be a Naga from Assam looking for the cheapest market to buy in. "Cradle-swinger" not only adds a touch of domesticity, but indicates the extreme differentiation of function which so often characterizes the life of a household in India.

Difficulties of classification being what they are, it was natural to attempt at the outset to simplify the occupational scheme by a widening of categories and a reduction of groups; as a result however of the insatiable desire of departments for more detailed figures the attempt ended in an increase of groups from 191 to 195, as the amalgamations which it was possible to induce them to accept were more than counterbalanced by the additional details which opportunity instigated them to require. On the whole, however, the occupational grouping was probably more satisfactory than in 1921 from the census point of view, and as far as their comparative value goes there has been little if any loss; as there has been no rearrangement at all of classes, sub-classes or orders except for the reduction of one order in sub-class II, Exploitation of Minerals, where the three orders of 1921, Mines, Quarries, and Salt, embracing six groups between them, have become two orders only, *Metallic minerals* and *Non-metallic minerals*, a much more logical division but embracing now thirteen groups instead of six.

A few minor transfers have been made among groups, where the existing classification seemed unsuitable or inaccurate. Thus group 101 of 1921 including persons employed in places of entertainment, which then appeared under order 18, 'Other miscellaneous and undefined industries,' now appears as group 183, order 49, sub-class VIII 'Professions and Liberal Arts'. The title of the order, *Letters, Arts and Sciences*, hardly seems appropriate, but this order contains perforce a number of other groups not covered by its definition which contribute to the education or entertainment of the public. Similarly witches and wizards have moved from group 189 of 1921, which they then shared unreasonably with beggars and vagrants, to group 181 of the same order of Letters, Arts and Sciences to be kennelled in their proper pack with astrologers, fortune-tellers and mediums. Literary they are not, but scientific they think they are, and artful they must be.

Similarly a certain number of occupations wrongly classified in 1921 have been allocated to different groups at this census. Saddle-cloth makers and embroiderers have been reclassified as workers in textiles instead of in leather, while sellers of the finished article have been included under trade in textiles instead of trade in means of transport. Sellers of grasshoppers were classified in 1921 under "trade of other sorts", they have been reclassified this time under "trade in foodstuffs". Changes of this kind, and few at that, are not likely to have affected the comparative values of the returns. A complete scheme of the occupational classification in 1931 will be found at the end of this chapter, and it will be convenient to reprint here the note of 1911 in which Sir Edward Gait explains the principles then and since followed in classifying occupation.

"(1) Where a person both makes and sells, he is classed under the industrial head; the commercial one is reserved for persons engaged in trade pure and simple. On the same principle

when a person extracts some substance, such as saltpetre, from the ground, and also refines it, he is shown under the mining and not under the industrial head.

(2) Industrial and trading occupations are divided into two main categories :—

(*a*) those where the occupation is classified according to the material of which the articles are made, and

(*b*) those where it is classified according to the use which they serve. As a general rule, the first category is reserved for the manufacture or sale of articles the use of which is not finally determined, but it also includes that of specified articles for which there is no separate head, and also the occupations, so common in India, which are characterized by the material used rather than the particular articles made. The ordinary village *mochi*, for instance, makes not only shoes, but also waterbags and all other articles of leather, which he tans himself.

(3) As a general rule, when a man's personal occupation is one which involves special training, *e.g.*, that of a doctor, engineer, surveyor, etc., he is classed under the head reserved for that occupation, irrespective of the agency by which he is employed. A ship's doctor, for instance, is shown as a doctor and not as a ship's officer. An exception is made in cases where the work in which an individual is employed involves further specialization, *e.g.*, that of a marine or sanitary engineer. Only those Government servants are shown in sub-class VII who are engaged in the general administration. Officers of the medical, irrigation, opium, post office and other similar services are classed under the special heads provided for these occupations.

As a further means of facilitating the classification of the entries recorded in the schedules and of maintaining uniformity of procedure an elaborate alphabetical index of occupation was prepared and circulated to all Provincial Superintendents for the guidance of their staff."

Distribution of Occupations.

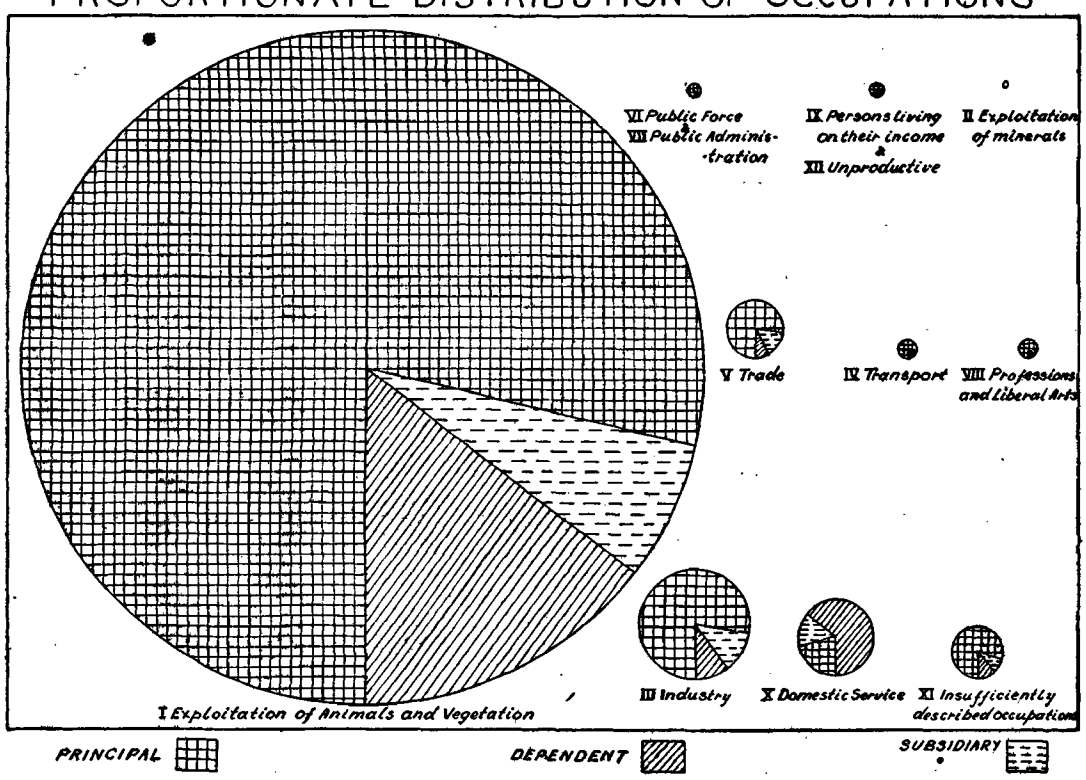
118. The proportional distribution of occupations, according to classes, sub-classes and orders will be found in some detail in the subsidiary tables at the end of this volume, the actual figures of the returns appearing by classes, sub-classes, orders and groups in Table X of part II, but for convenience of reference the latter statistics have been reduced to a distribution of 10,000 livelihoods according to classes and sub-classes and are given in the following table :—

Class and sub-class.	Means of subsistence.	Total.	Principal occupation.		Dependent occupation.		Subsidiary occupation.	
			Males.	Females.	Males.	Females.	Males.	Females.
A, B, C & D.	**All occupations** ..	**10,000**	**5,772**	**1,649**	**454**	**1,241**	**678**	**211**
A	Production of Raw Materials.	6,584	4,081	1,103	344	610	375	71
I	*Exploitation of Animals and Vegetation.*	*6,560*	*4,066*	*1,099*	*343*	*610*	*372*	*70*
II	*Exploitation of Minerals*	*24*	*15*	*4*	*1*	..	*3*	*1*
B	Preparation and Supply of Material Substances.	1,756	1,054	305	54	104	202	37
III	*Industry*	*1,038*	*610*	*193*	*30*	*76*	*108*	*21*
IV	*Transport*	*165*	*118*	*10*	*7*	*4*	*24*	*2*
V	*Trade*	*553*	*326*	*102*	*17*	*24*	*70*	*14*
C	Public Administration and Liberal Arts.	286	210	18	14	4	38	2
VI	*Public Force* ..	*56*	*49*	..	*1*	..	*6*	..
VII	*Public Administration* ..	*69*	*55*	*2*	*2*	*1*	*9*	..
VIII	*Professions and Liberal Arts.*	*161*	*106*	*16*	*11*	*3*	*23*	*2*
D	Miscellaneous ..	1,374	427	223	42	523	58	101
IX	*Persons living on their income.*	*16*	*9*	*2*	*1*	..	*4*	..
X	*Domestic Service* ..	*751*	*107*	*53*	*17*	*469*	*14*	*91*
XI	*Insufficiently described occupations.*	*503*	*260*	*142*	*12*	*46*	*34*	*9*
XII	*Unproductive* ..	*104*	*51*	*26*	*12*	*8*	*6*	*1*

It will of course be observed that the 10,000 occupations above do not represent 10,000 individuals, 884 of these occupations are subsidiary to others, so that the whole 10,000 occupations afford a means of subsistence to 9,116 workers only. Of these 9,116, earners number 7,421, of whom 884, that is nearly one-eighth, have secondary occupations in addition to their principal occupations. The remaining 1,691 are dependants assisting earners either directly

in the occupation by which they earn, or indirectly, *e.g.* by working on the land of a husband or father whose occupation is returned as cultivating owner, or, to give another instance, by weaving, for the occupation of dependants has been shown according to the occupation itself and not according to the occupation of the earner on which dependent. It is hardly necessary to draw attention to the great preponderance of agriculture, whether as the principal or subsidiary occupation and for dependants no less than for earners, and of the females returned as having domestic service as a dependent occupation it is practically certain that a large proportion also help in the fields. Those returned as being of insufficiently described occupations probably belong for the most part to Class B, consisting as they do of persons who have returned their occupation by some such vague term as contractor, shop-keeper, clerk, labourer, without giving the information necessary to classify them in any definite category. It is likely therefore that those engaged in the preparation and supply of material substances number some 2,000 in every 10,000 instead of only 1,756.

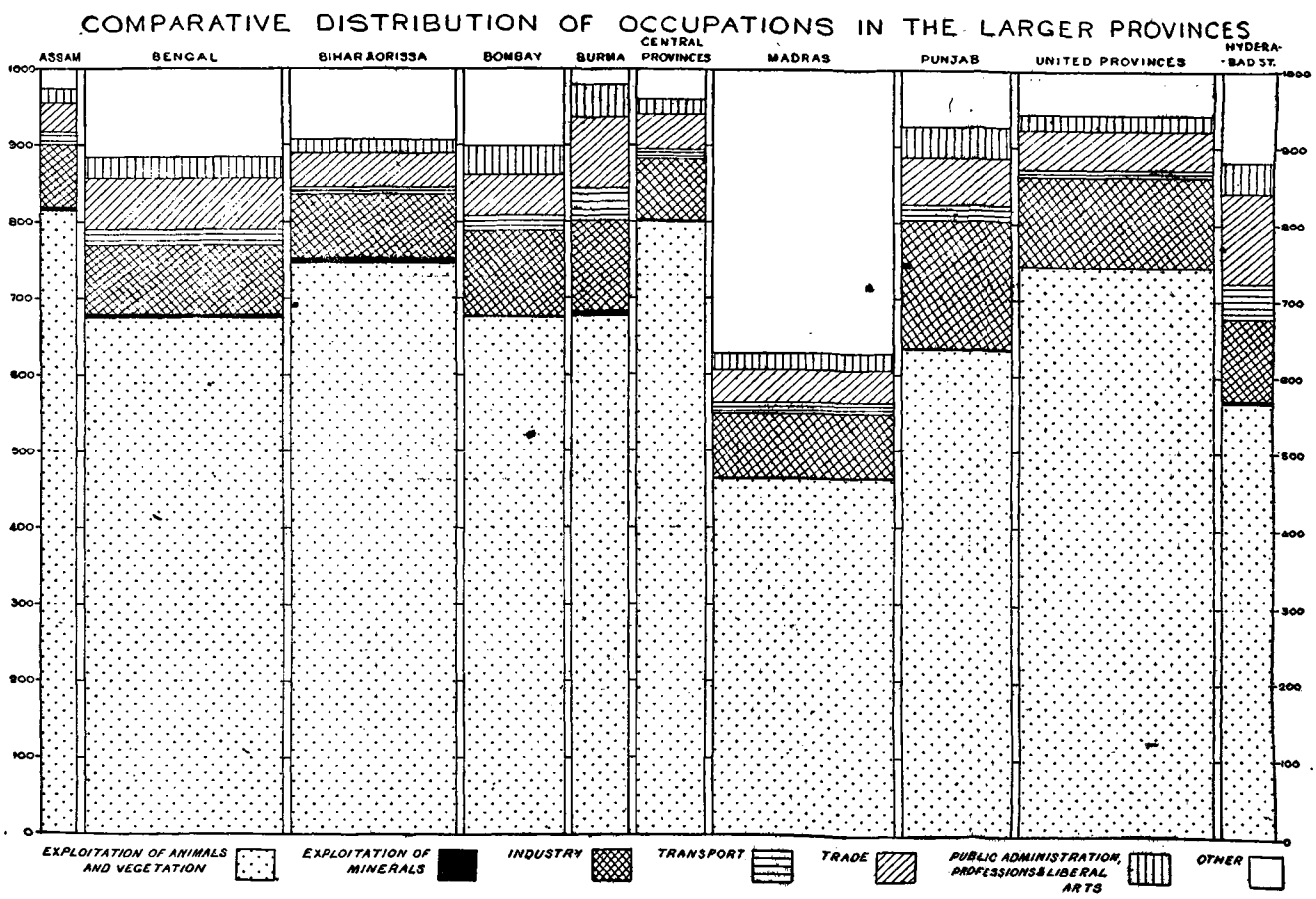
PROPORTIONATE DISTRIBUTION OF OCCUPATIONS



The comparative occupational constitution of the larger geographical units is shown in the following table and illustrated graphically in the diagram below, subsidiary occupations being included in both cases :—

Class or sub-class and description of occupation.	Distribution of 1,000 occupations in									
	Assam.	Bengal.	Bihar and Orissa.	Bombay.	Burma.	Central Provinces.	Madras.	Punjab.	United Provinces.	Hyderabad State.
A. and B.										
I. Exploitation of animals and vegetation.	814	680	747	676	678	800	462	634	745	568
II. Exploitation of Minerals.	4	2	8	1	6	2	1	1	..	4
III. Industry ..	83	88	83	113	118	83	88	170	117	107
IV. Transport ..	17	20	9	20	41	12	13	21	9	45
V. Trade ..	38	68	44	51	93	44	42	60	51	119
C. Public Administration, Professions & Liberal Arts.	18	28	17	39	44	20	22	41	20	38
D. Others	26	114	92	100	20	39	372	73	58	119

Some of the apparent vagaries of these figures call for a word of comment. The very high figure against D in Madras is caused by the large numbers of insufficiently described occupations, probably to be redistributed between I, III and V. The high proportion of industrial occupations in the Punjab is a recurrent feature and was noticed at any rate in 1911. In Burma the high proportion of trade is largely induced by the extent to which women engage in trade both as a principal and as a subsidiary occupation ; the unexpected industrial figure is again occasioned by the participation of women as dependent workers and probably by the extent to which village industries are practised as subsidiary to agriculture or other occupations and the high figure of transport reflects the comparatively sparse population scattered in many cases on long lines of communication by river or by road. Similarly in Hyderabad State the high proportion of transport workers is possibly due to the comparative absence, at any rate till recently, of easy communications by road or rail. It should perhaps be pointed out that in Assam tea appears in sub-class I as agricultural and not in sub-class III. The table of course only shows the comparative distribution within each province, but in the diagram that follows, the base of each distribution column is proportionate to the total population of each province, subsidiary occupations again being included in the distribution of occupations.



Changes in Distribution.

119. In order to compare the distribution of occupations in 1931 with that disclosed by the census of 1921 it is necessary to exclude from the 1931 figures the numbers of subsidiary occupations and to calculate the 1921 figures on workers

only. The marginal table gives the comparative results. It should be made clear at the outset that the decrease in class A, caused undoubtedly by the decrease in sub-class I, for II has hardly changed, is apparent rather than real. The decrease on paper is one of 507, per 10,000, and this is more than balanced by the increase of 535 in class X. The change is due to the number of females, 572 per 10,000 workers, who have returned their occupation as domestic service. In 1921 these would have appeared as workers (mainly if not entirely agricultural) in the occupations in which they assisted the male members of their families. Similarly the decrease in class B of 94 per 10,000 divided between Industry,—78, and Trade,—35, but balanced in part by the increase under Transport, is largely met by the increase of 99 in class XI.

Class or sub-class.	Means of subsistence.	Distribution of 10,000 workers in	
		1921.	1931.
A.	Production of Raw Material	7,241	6,734
I	*Exploitation of Animals and Vegetation.*	*7,217*	*6,711*
II	*Exploitation of Minerals* ..	*24*	*23*
B.	Preparation and Supply of Material Substances.	1,759	1,665
III	*Industry*	*1,075*	*997*
IV	*Transport*	*134*	*153*
V	*Trade*	*550*	*515*
C.	Public Administration and Liberal Arts.	283	269
VI	*Public Force*	*71*	*55*
VII	*Public Administration* ..	*69*	*64*
VIII	*Professions and Liberal Arts.*	*143*	*150*
D.	Miscellaneous	717	1,332
IX	*Persons living on their income.*	*13*	*14*
X	*Domestic Service*.. ..	*173*	*708*
XI	*Insufficiently described occupations.*	*406*	*505*
XII	*Unproductive*	*125*	*105*

The insufficiently described occupations in that class are, at any rate in the great majority of cases, general terms connected with industry and trade such as 'shopkeeper', 'trade', 'contractor' or 'coolie' which cannot be allotted to any particular category. It is possible that the greater prevalence of unemployment in 1931 as compared to 1921 has contributed to diverting returns from definite to indefinite categories. The census schedule contained no provision for any distinction between a man employed in his normal calling and one having a calling but temporarily unoccupied, and in the case of many callings in industry and trade the distinctive function of the individual will largely depend on what he is doing at the time when the census takes place, since the particular direction of his energies will normally vary from time to time according to the demand for labour or goods or the nature of openings that present themselves. Thus a labour contractor might be returned at one census under transport by road, at another transport by rail and at a third under transport by water according to the purpose for which he supplied the labour. If without a contract, he would be a contractor and nothing more, and therefore relegated to class XI. The same obviously applies to much labour and in point of fact to a considerable volume of industrial and trading occupations in India where industry in general is less specialised and functions less differentiated than in highly industrialized countries of the west. The other changes since 1921 call for little comment. The increase in sub-class IV, Transport, is natural and expected. Communications have everywhere increased, roads are better, and motor traffic has become ubiquitous during the decade. Indeed if there is any cause for doubt it is whether the increase has not really been greater than that indicated by the figures. The increase in sub-class VIII, Professions and Liberal Arts, is the natural accompaniment of the gradual spread of literacy. The decreases in sub-classes VI and VII—Public Force and Public Administration, indicate either that there has been no increase in those occupations which is commensurate with the increase in population, or an absolute decrease which is very slight except in the case of the Army. There has also been a decrease in sub-class XII which comprises inmates of asylums, gaols and institutions, beggars, vagrants, prostitutes and similar classes. It will be observed from the more detailed examination of the figures in § *ii* of this chapter that there is a general tendency towards increase in what may be described as modernized occupations, though the degree of that increase is perhaps less than one would be inclined to expect to find.

Subsidiary Occupations.

120. For subsidiary occupations no complete means of comparison with 1921 is available. In 1911 however figures were given of the numbers of actual workers who were partly agricultural but whose principal occupation was not agriculture. These totalled 53 per 1,000 for India while those who returned agriculture as a subsidiary occupation in 1931 numbered 44 per 1,000, almost certainly an understatement, and it is probably not without significance that there are just 9 females per mille of all occupations who have returned domestic service as their subsidiary occupation ; it is likely that they help in agriculture as well. The tendency when in doubt is to return agriculture as the principal occupation on account of its respectable status, in preference to returning it as subsidiary, and in any case the returns of subsidiary occupations of all kinds are probably below the real figure. The distribution of 1,000 subsidiary occupations is shown in the marginal table, and the diagram below shows a comparison between the distribution of occupations followed as principal and as subsidiary as well as the occupations of dependent workers. It will be noticed that the distribution by subsidiary occupation corresponds generally to that by principal occupation after allowing for the preference already pointed out for returning an agricultural profession as principal in case of any conflict between that and some non-agricultural calling. In class D the subsidiary occupations are weighted by the returns of domestic service as subsidiary, this representing the contribution of women to the general family maintenance by their household services often performed in addition to help in the fields, and in Assam and Burma in addition to spinning, weaving and dyeing silk or cotton and other cottage industries such as the rearing of silkworms. The importance of subsidiary occupations was brought out by the enquiries of the Banking Enquiry Committee which in the United Provinces at any rate attributed to their subsidiary occupations the comparative freedom of a considerable proportion of the peasantry from heavy indebtedness.

Class and sub-class.	Distribution of 1,000 workers each in	
	Principal occupations.	Subsidiary occupations.
A.	698	505
I	*696*	*500*
II	*2*	*5*
B.	183	270
III	*108*	*146*
IV	*17*	*29*
V	*58*	*95*
C.	31	45
VI	*7*	*7*
VII	*8*	*10*
VIII	*16*	*28*
D.	88	180
IX	*2*	*4*
X	*22*	*119*
XI	*54*	*49*
XII	*10*	*8*
Total ..	1,000	1,000

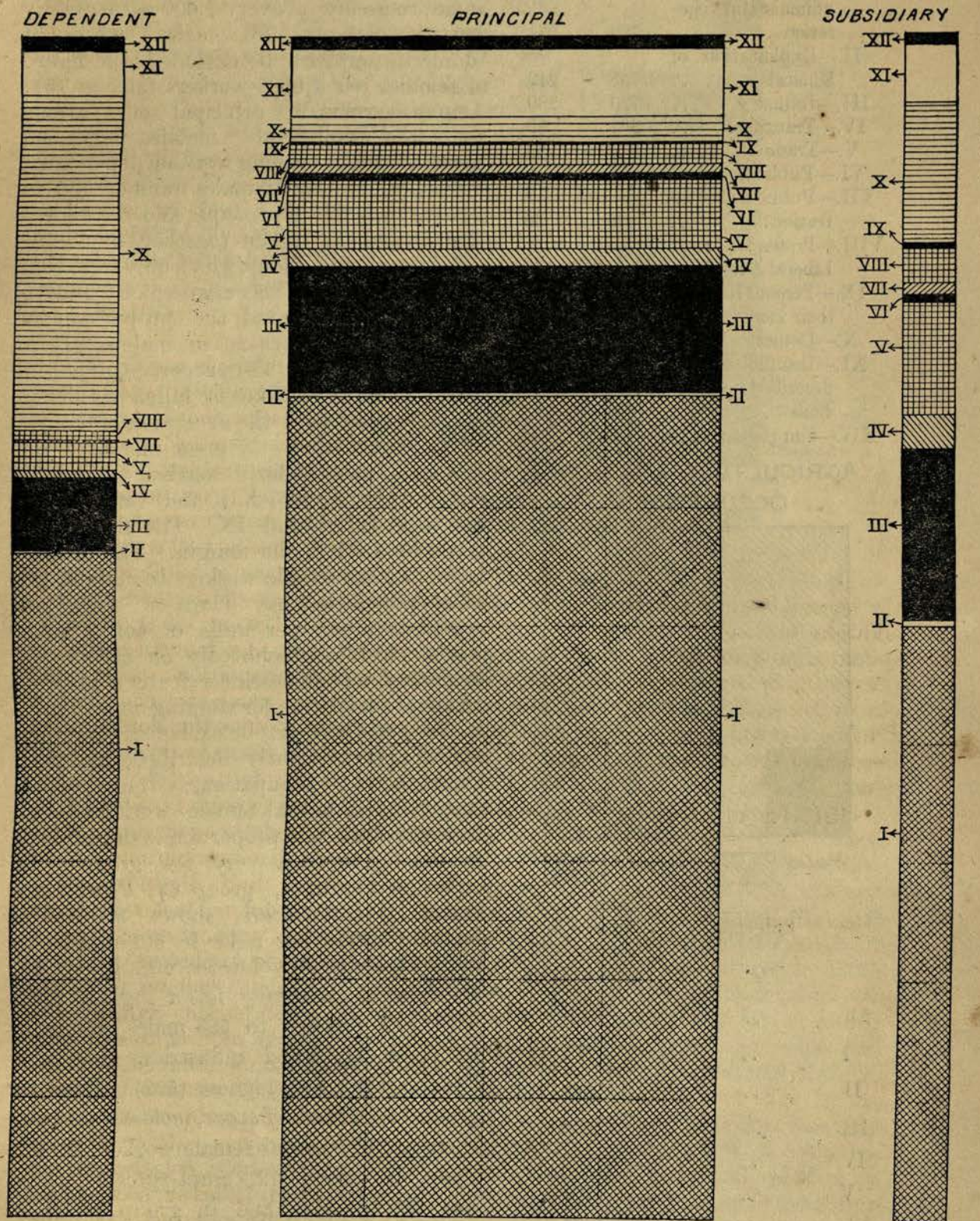
Dependent Occupations.

121. The occupations of dependants, as might be expected are a little differently distributed. The marginal table shows the comparative distribution of 1,000 of each of principal and dependent occupations. The main difference here is in the comparatively small proportion of dependants who are occupied in class C (a difference which naturally follows from the nature of the occupations falling into that class) and in the high figures of class D. These figures are determined by those of sub-class X, which contains the large numbers of female dependants who have returned domestic service as their occupation. In very many cases it is combined with assistance given in other occupations as already indicated. Otherwise the distribution is again generally on similar lines to that in principal and subsidiary occupations, indicating that the census figures as a whole give a reasonably accurate conception of the general distribution of functions in the community.

Class and sub-class.	Distribution of 1,000 each of	
	Earners (principal occupation).	Working Dependants.
A.	698	563
I	*696*	*562*
II	*2*	*1*
B.	183	93
III	*108*	*63*
IV	*17*	*6*
V	*58*	*24*
C.	31	11
VI	*7*	*1*
VII	*8*	*2*
VIII	*16*	*8*
D.	88	333
IX	*2*	..
X	*22*	*287*
XI	*54*	*34*
XII	*10*	*12*
Total ..	1,000	1,000

It is, however, very clear that the proportion of working to non-working dependants is very much higher in agriculture (sub-class I) than in any other means of subsistence. Excluding sub-class X, in which the females who have returned domestic service as a dependent or subsidiary occupation really belong to some other sub-class, working dependants are to earners as 19 to 100 in agriculture, etc., as 14 to 100 in insufficiently described occupations, as 13 to 100 in Industry, and as 9 to 100 in Trade.

COMPARATIVE DISTRIBUTION OF OCCUPATIONS DEPENDENT, PRINCIPAL & SUBSIDIARY



NB. *The base is proportional to the total numbers represented, & the height to the distribution by sub-classes indicated by the Roman numbers.*

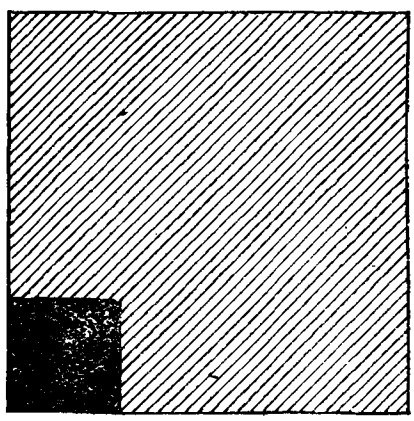
I EXPLOITATION OF ANIMALS & VEGETATION — II EXPLOITATION OF MINERALS — III INDUSTRY — IV TRANSPORT — V TRADE — VI PUBLIC FORCE — VII PUBLIC ADMINISTRATION — VIII PROFESSIONS & LIBERAL ARTS — IX PERSONS LIVING ON THEIR INCOME — X DOMESTIC SERVICE — XI INSUFFICIENTLY DESCRIBED OCCUPATIONS — XII UNPRODUCTIVE

Occupation by Sex.

122. The distribution of occupation by sex is indicated in the marginal table which shows the proportion by sex for one thousand in each sub-class. Dependent and subsidiary workers are included, though the proportion of females to males is naturally much higher among working dependants than it is among earners either in principal or subsidiary occupations. Thus in subsidiary occupations alone there are in every 1,000 earners only 239 females to 761 males, while if 'domestic service' be excluded, the figure of females per 1,000 workers falls to 154. Among earners in principal occupations again the number of females per 1,000 earners is 222. Among working dependants on the other hand females number 733 to 267 males, while if principal and dependent occupations be taken together, excluding subsidiary occupations, which only represent the duplication of occupations by individuals already counted, the proportion of actual female workers to male is 317 to 683 in every 1,000. The proportion of actual female workers has likewise fallen heavily in all sub-classes with the exception of course of X, which shows a great increase, the fall being particularly marked in in sub-classes I, II, XI and XII and only rather less so in III, V and IX. The figures are given for 1931 in the margin. The proportion of actual female workers to male in the whole population has increased since last census from 455 per mille of actual male workers to 465, undoubtedly on account of the inclusion of domestic service as a possible return of occupation for working dependants. If this sub-class X, be excluded, together with XI, Insufficiently described, and XII Unproductive occupations, the highest proportion of actual female workers is in Industry, but this proportion is determined by the figures in a very few groups. In order 9, Ceramics, group 63, *Potters and makers of earthenware*, shows 309 actual female workers per mille to 691 males; in order 12, Industries of dress, etc., group 85, *Washing and cleaning*, has a higher ratio with 417 females to 583 males; but it is in order 11, Food industries, that the female ratio goes highest (522). Here in group 74, *Makers of sugar, molasses and gur* there are 527 actual female workers to 473 male, in group 72, *grain-parchers*, there are 626 to 374, and in group 71, *Rice-pounders and huskers, and flour grinders* there are 815 females to every 185 actual male workers. The next sub-class in order of the female ratio is agriculture, where the female element is principally provided in the form of labour in the fields—group 7

Number and description of sub-class.	Number per 1,000 workers in principal, dependent and subsidiary occupations, of	
	Males.	Females.
I.—Exploitation of animals and vegetation	729	271
II.—Exploitation of Minerals ..	758	242
III.—Industry ..	720	280
IV.—Transport ..	901	99
V.—Trade ..	747	253
VI.—Public Force ..	992	8
VII.—Public Administration.. ..	970	30
VIII.—Professions and Liberal Arts ..	872	128
IX.—Persons living on their incomes ..	820	180
X.—Domestic Service	184	816
XI.—Insufficiently described occupations	608	392
XII.—Unproductive	658	342

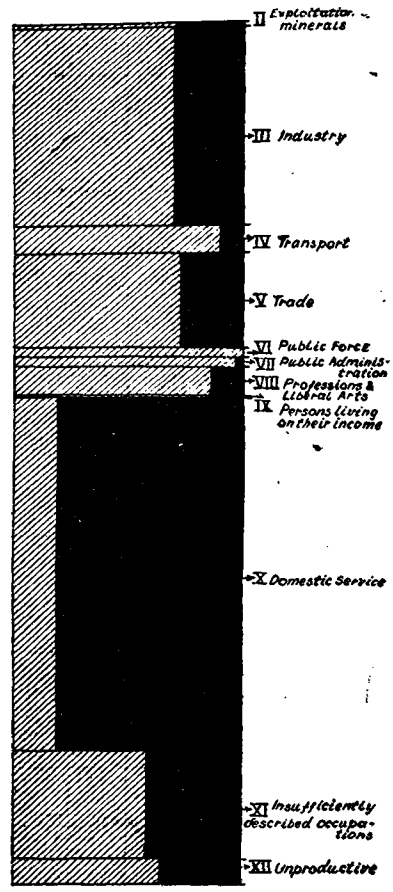
AGRICULTURAL & PASTORAL OCCUPATIONS



Males Females

Sub-class.	Number of females in every 1,000 actual workers.
All	317
I	279
II	250
III	297
IV	103
V	269
VII	33
VIII	140
IX	218
X	808
XI	409
XII	351

has 457 actual female workers to 543 male, and in that of labour in special cultivation, for group 15, *Tea*, shows 456 female to 544 actual male workers. Group 19, *Collectors of forest produce*, has a majority of female workers but the absolute numbers are very small in any case. The next highest ratio is found in sub-class V, Trade. Here order 32 (other trade in foodstuffs) shows a high proportion of female workers in group 131, *Dairy produce, eggs and poultry*, 514 females to 486 males, and order 37, Trade in fuel, shows 557 female to 443 male workers as *Dealers in charcoal, cowdung and firewood*. Finally in sub-class VIII, Professions and Liberal Arts, order 47, Medicine, shows a ratio of 707 actual female workers to 293 male in group 172, *Midwives, compounders, nurses, etc.*, in which the female element is obviously likely to be high, though the figures of this group are not enough to affect perceptibly the ratio for the sub-class as a whole, in which it is lower than in any other sub-classes except Public Force, Public Administration and Transport.



123. It has already been explained that at this census special returns from establishments employing organized labour were not called for, and that owing to the necessity for retrenchment at the compilation stage one of the sorts abandoned was that for the return of industry made on the general schedule, as most Census Superintendents regarded the returns in this column as not very satisfactory. In any case the number of workers employed in organized labour is extraordinarily low for a population the size of India's and the daily average number of hands employed by establishments in British India to which the Factories Act applies is only 1,553,169. The total India figure for persons occupied in plantations, mines, industry and transport in 1921 was 24,239,555 of whom only 2,685,909 were employed in mines, plantations or organised industrial establishments having 10 or more employees. The total figure under the three same heads in 1931 amounts to 26,187,689, and if labour in similar establishments is in the same proportion it will now number 2,901,776. Figures of the daily average of persons employed indicate that it has increased during the last decade at the rate of about 30 per cent., in which case it will now number 3,500,000. Probably 5,000,000 may be fairly taken as the figure of organized labour in India in 1931, as the figure of 3½ million represents only the daily attendance in registered factories. It has been claimed that Indian factory labour is very largely of the casual description; that it is not skilled and it is not recruited even from the hereditary trades to which it might be expected to look for its supply; that while the hereditary weaver is maintaining a precarious existence weaving *khaddar* at greater cost than is required for machine-made fabric, the mills producing the latter seek their labour in the casual labour market, recruiting very largely from agriculturists who come and work in the mills for a time and then go back to their villages; and that the same applies to most forms of factory labour in India. It is true that industrial labour is continually changing—a fact obvious enough at the census when the final enumeration was checked against the preliminary one, but the bulk of it is probably semi-skilled, and in any case factory conditions bear little relation to hereditary handicraft. The conditions under which it lives are frequently incredibly squalid and overcrowded (*vide*, for instance, paragraphs 43 and 51 above) and there is little wonder that countrymen will not bring their wives and families to live in industrial centres if they can help it. Housing conditions may be bad in villages but there is at any rate plenty of space outside the village. The general result is that factory labour is largely recruited from younger sons for whom there is no land or need at home, village servants for whom there is no work and whom the village is unwilling to maintain, cultivators in debt who

Organized Industry.

need cash to pay off a mortgage, ne'er-do-weels who have attracted too much attention to themselves at home, and women frequently of equivocal status. The conditions under which this labour force lives result in a very heavy incidence of disease and mortality; it has already been pointed out (paragraph 109 above) that coolies and factory hands provide the majority of leprosy cases. This kind of labour when unprotected is easily sweated. The growth, for instance, of the tobacco industry is pointed out below, and the number of persons employed in this industry has increased from less than 48,000 in 1921 to nearly 148,000 in 1931. They work mainly in *biri* factories which employ no mechanical power and are therefore outside the operation of the Factories Act. Much child labour is employed and the Whitley Commission remarked that "workers as young as five years of age may be found in some of these places working without adequate meal intervals or weekly rest days, and often for 10 or 12 hours daily, for sums as low as 2 annas in the case of those of tenderest years". The factories themselves are often merely slum buildings occupied for the purpose. The Census Superintendent of Madras writes of the *biri* making industry as follows:—

"There is great variety in size in the manufacturing units; it depends chiefly on the premises available. Where a godown or shed is used the employees may run up to 150 or 200; where a house is used 50 would be a maximum and 30 an average. There is a good deal of employment of children and long hours. Parents take a small advance from the employer of their children and so are little disposed to protest unduly or to withdraw them. The lighting and sanitary arrangements of the establishments are far from good, or are almost nil. Payment is by outturn, generally about 12 annas a thousand. The ordinary workman's performance would be about 100 an hour. Children are usually paid by the week, payment varying with capacity and age. The Factory Act does not apply to these places because no power is used. If section 2 were extended to them, it could be defeated by keeping the numbers below ten. A tendency towards smaller units seems already apparent. North Arcot is one of the strongholds of beedi making, with 74 factories and 1,200 workers, half of whom were children. These factories are essentially fluctuating in nature. They can be set up, closed and transferred with equal ease. It is certain that a good deal of this form of employment has not entered the census returns."

A non-official bill has been introduced to deal with the *biri* industry in Madras, but the evil is very far from being confined to that province and the Census Superintendent of the Central Provinces and Berar draws attention to the conditions of this industry in Bhandara and Jubbulpore. Similar conditions will probably be found to exist in other industries which do not employ mechanical power, and India may be fortunate in the present backwardness of her industrial development if it enables her to avoid allowing it to grow further on these lines. There are, it is true, a few notable exceptions to the general conditions of the housing and treatment of labour, and Jamshedpur has already been mentioned (paragraph 51); Messrs. Binny at Madras and the Empress Mills at Nagpur might be added, but the industrial concerns which pay much attention to the accommodation of their employees outside the factory itself are the exception and very far from being the rule, though inside the factories themselves conditions are generally satisfactory in the case of establishments within the scope of the Factories Act.

Section ii—Statistics of Orders and Groups.

Exploitation of animals and Vegetation.

124. Order I, **Pasture and Agriculture,** occupies 71 per cent. of the actual workers of India, or, if those be excluded who follow it only as subsidiary to some other occupation, 67 per cent. The great majority of these are occupied in agriculture proper, and are shown in sub-order (*a*) **Cultivation** as distinct from (*b*) Cultivation of Special Crops, Fruit, etc., (*c*) Forestry, (*d*) Stock-raising and (*e*) the Raising of Small Animals and Insects. The marginal table shows the proportional figures of the sub-orders of Order I. Sub-order (*a*) was in 1921 divided into Rent-receivers, Cultivators, Agents, etc., Farm servants and Field labourers. No attempt was made to distinguish the two latter categories this time, but that of cultivators was divided into cultivating owners, cultivating tenants and cultivators of jhum and shifting areas, and the category of

Distribution of 1,000 occupations in Order I.

Pasture and Agriculture.

Sub-order.	No. per mille of total.
(*a*) Cultivation	943
(*b*) Cultivation of Special Crops, Fruit, etc.	17
(*c*) Forestry	4
(*e*) Stock-raising	35
(*d*) Raising of Insects, etc. ..	1

agents was divided up into agents of owners, agents of Government, rent collectors, clerks, etc. The first group, that of landlords, is in effect the same as in 1921, for though it was desired to distinguish real agricultural non-cultivating proprietors from those whose interest in the land was indirect, it proved quite impossible in practice and it was ultimately necessary to define landlords as rent-receivers and include all non-cultivators receiving income in money or kind from the labours of others on the land. Rights in land in India are complicated and involved to a degree incredible to persons familiar only with the simpler tenures of western Europe, and between the man who cultivates it and the man who nominally owns it there are often a number of intermediate holders of some interest or other in the produce of the land. Holders of such intermediate rights have technical names which vary from one locality to another and any attempt to classify and sort for them would involve technicalities much too numerous and intricate for a census staff to deal with, apart from the fact that the actual rights involved are frequently the subject of highly controversial dispute among the parties concerned. Group I therefore of *Non-cultivating Proprietors taking Rent in Money or Kind,* includes all persons returned under the convenient label of 'rent receiver', a simple definition easily understood, and numbers 4 per cent. of the total of occupations described as 'cultivation', of which percentage less than a quarter are subsidiary to some other calling. The great bulk of cultivators appear in groups 5, 6 and 7 as *Cultivating Owners, Tenant Cultivators* or *Agricultural Labourers,* fairly evenly divided as regards total numbers, owners being the fewest of the three and labourers including large numbers of working dependants who assist either owners or tenants in the cultivation of their holdings. A difficulty of definition was also raised by the term 'cultivating owners'. Freehold tenures, as understood in Britain, are conspicuous by their absence in India generally, and the variety of tenancies and sub-tenancies particularly in Bengal, is legion. A census definition of ownership was found unexpectedly difficult to frame in any simple manner which would be consistent in most provinces, and ultimately ownership was defined as the possession of rights of occupancy, a term which covered all cultivators holding on a lease from Government as well as many others with a conditional or preferential right to their holdings subject to periodic reassessment of rents. Such owners formed 27 per cent. of the total engaged in cultivation and 18 per cent. of the total of actual workers in all occupations, these percentages including those for whom such ownership was only a subsidiary means of subsistence. The only previous figures which attempted to make any sort of distinction between owners and tenants were those of 1891. They are not strictly comparable, as the figures given include all non-working dependants, but in so far as they afford any comparison they indicate an increased proportion in 1931 of cultivating owners to cultivating tenants. The figures are given below:

1891.			1931.		
Census description.	Population supported.	Ratio.	Census description.	Number of workers.	Ratio.
Land occupants, cultivating.	45,354,183	533	Cultivating owners	28,397,214	784
Tenants and sharers, cultivating.	85,164,663	1,000	Tenant cultivators	36,238,654	1,000

On the other hand the Census Superintendent in Burma reports that alienation of land to non-agriculturists has increased and that in the principal districts of Lower Burma the area held by Chettiars increased by 140 per cent. between July 1st, 1930 and June 30th, 1932. That this has also taken place in India generally is perhaps suggested by the apparent increase in the proportion of agricultural labourers to owners and tenant cultivators. These two categories appeared in 1921 under the common designation "ordinary cultivators", and for every 1,000 ordinary cultivators there were 290 agricultural labourers who then appeared in two groups as "farm servants" and "field labourers". In 1931 it must be remembered that the working dependants of owner and tenant cultivators have appeared as dependent workers in the category of agricultural labour, and the proportion therefore of agricultural labourers to cultivators is inflated by these figures, yielding 515 labourers for 1,000 cultivators if all actual workers are taken and 519 if

subsidiary occupation be also included. If however we rely on principal occupation alone, into which the figures of working dependants do not enter at all in 1931, we find that to every 1,000 cultivators there are 466 agricultural labourers, a very much higher ratio than in 1921. Probably the fairest comparison would be to take the 1931 figures of cultivating owners and tenant cultivators both principal and dependent and to compare them with the number of those only who returned agricultural labour as their principal occupation, in which case the resulting ratio is 407 agricultural labourers to every 1,000 cultivators. In any case the change in ratio is somewhat remarkable, even when adopting the lowest ratio which can be compared with that of 1921. Possibly the explanation is that a large increase has taken place in the agricultural population without a corresponding increase in actual holders of land whether as tenants or owners though it is likely that a concentration of land in the hands of non-cultivating owners is also taking place.

	1921. Workers.		1931.	
	Farm servants *plus* Field labourers.	Ordinary Cultivators.	Principal occupation. Agricultural labourers.	Actual Workers. Cultivating owners *plus* Tenant cultivators.
Total figures ..	21,676,107	74,664,886	24,925,357	61,180,004
Ratio ..	291	1,000	407	1,000

The marginal table shows the distribution per 1,000 of occupations defined as cultivation and the number of each per 1,000 of actual workers in all occupations. Cultivators of *jhum*, *taungya* and shifting areas are mostly members of hill and forest tribes whose land is irrigable if at all only with excessive difficulty and who are therefore compelled to clear fresh areas for cultivation, as the growth of weeds in cleared areas makes cultivation impossible after a couple of years. After a period of fallow, which varies according to the land available, the plot is again cleared and cultivated. The method is wasteful and leads to denudation of the hillsides but is not only the sole method commonly known to those that practise it, and their only means of subsistence, but frequently the only method of cultivation possible on hilly and ill-watered slopes. Cultivators of shifting areas have been classified separately from cultivating owners as not only are the methods practised and the results obtained very different, but the right of possession in individual plots has not everywhere been recognised by the state, though among the tribesmen themselves the land thus intermittently cultivated is frequently regarded as a permanent and heritable possession, the subject of sales, mortgages, wills and marriage settlements.

Distribution of 1,000 occupations in Order I (*a*) *Cultivation.*					Number per 1,000 of total actual workers.
Group number.	Total.	Principal.	Dependent.	Subsidiary.	
1. Rent-receivers	40	29	3	8	27
5. Cultivating owners.	275	228	33	14	184
6. Cultivating tenants.	350	288	42	20	235
7. Agricultural labourers.	324	241	63	20	218
8. Cultivators of shifting areas.	8	7	1	..	5
2, 3 and 4, Agents, clerks, etc.	3	1	..	1	2

If a comparison be made between the area of land under crops and the number of agriculturalists actually engaged in cultivation the result found for British India is that for each agriculturalist there is 2·9 acres of cropped land of which 0·65 of an acre is irrigated. The corresponding figures for 1921 are 2·7 and 0·61. If however we take only the figures of owner and tenant cultivators, excluding, rent-receivers, agents and agricultural labourers, we find that each cultivator has four

and a half acres to cultivate, and of irrigated land, excluding in this case the *jhumiyas* (cultivators of shifting areas), each cultivator has just over an acre. The apparent increase in cultivated area per cultivator over 1921 in this case is nearly an acre, but the 1921 figures of ordinary cultivators probably include a number of dependants who have appeared in 1931 under 'domestic service', and the real extent of the increase in land under cultivation per cultivator is probably not more than one-fifth of an acre if indeed there is any such increase at all. Similarly the apparent decrease of agriculturalists since 1921 suggested by the figures in the margin is not to be taken at its face value, on account of the transfer of returns to 'domestic service' and to the unspecified category, and even the apparent decrease indicated in the margin is transformed to an increase of three millions when the states are included. This is not without significance, as it is in the states that there has been the greatest rate of increase in population since 1921, and in the states as a whole that there is the least pressure of population on space, though the available land is generally poorer than in British India. It seems likely therefore that the increase of agriculturalists is resulting in the extension of cultivation to areas which yield a low economic return.

British India.

Census.	Cultivated acreage.	Cultivators.	Agriculturalists.
1921 ..	212,259,506	59,205,285	79,654,841
1931 ...	228,160,853	50,015,428	78,545,253

The cultivation of special crops occupies a mere fraction of the population concerned in pasture and agriculture, under 2%, the greater part of which is engaged in the production of tea. The persons whose principal, dependent or subsidiary occupation contributes to tea-production number over a million, and over 45% of them women. If the miscellaneous group of market-gardeners, flower and fruit growers be omitted, the special crop occupying the next highest number is coconut, on which 203,000 odd are employed, though here there must be a very considerable output grown by ordinary cultivators who do not even appear at all as growers of special crops. Similarly in the case of *pan*, though normally this is a specialized crop, considerable quantities are grown, at any rate in the hills, by cultivators who combine the care of *pan*-vines grown in the forest with their other avocations.

Distribution of 1,000 occupied in the growing of special crops.

Cinchona	1
Coconut	106
Coffee	29
Pan-vine	56
Rubber	10
Tea	561
Miscellaneous	237

Forestry, Order 1 (*c*), employs still fewer than special cultivation—4 per mille only of the total in order 1 and more than half of them woodcutters and charcoal-burners. Forest officers, rangers and guards amount to less than an eighth of this 4 per mille and the rest are collectors of forest produce, among whom collectors of lac have fallen since 1921 by more than 50%. The value of lac has fallen since the war-time boom, but it is possible that this decrease is more than balanced by the coming into existence of 34,000 lac cultivators—Order 1(*e*), **Raising of Small Animals and Insects,** who do not figure at all in the 1921 Occupation Table and whose numbers are not apparently relevant to those of the corresponding sub-order at that census, as keepers of bees and birds show an increase and of silkworms only a numerically small decrease, which becomes an increase if subsidiary occupations are included.

The remaining Sub-Order, 1(*d*), **Stock raising** is, after cultivation, that which provides most occupations, but only 36 per mille of the whole order of pasture and agriculture. Cattle and buffalo graziers account for over a million, shepherds, goat-herds, pig-breeders, etc., for nearly three million, and breeders of horses and other transport animals for less than 45,000.

Order 2, '**Fishing and Hunting**' employs even fewer than Sub-order 1(*b*) of special cultivation. Here again fishing is an occupation often combined with agriculture. Moreover, it is one which in Hindu society is looked on askance, and

this probably tends to reduce the number of returns very considerably. As a principal occupation the numbers occupied in fishing and pearling run into six figures only in Bengal and Madras.

Exploitation of Minerals.

125. Reference has already been made to the changes in the arrangement of the groups in class II, in which the three orders of 1921, Mines. Quarries and Salt, have given place to two only, **Metallic** and **Non-metallic minerals**, while the six groups, under the former three orders have become thirteen. The figures under each group are unexpectedly low, the largest being those under coal which occupies 205,000 persons, and none of the other groups reach a quarter of this figure. There has been a positive decrease of actual workers since 1921 amounting to over 1,000, a decrease of 26,000 female workers being balanced by an increase of 25,000 male workers, probably in part at any rate as a result of legislation restricting the employment of women underground. After coal the extraction of building materials, including stone, clays and material for cement, occupies the next highest number, then the manufacture of salt and saline substances and then the extraction of petroleum. The relative figures are given in marginal table.

Distribution of 1,000 workers in the extraction of minerals.

Metallic minerals—	
Gold	30
Iron	30
Lead, silver and zinc ..	23
Manganese	35
Tin and wolfram ..	12
Others	4
Non-metallic minerals—	
Coal	507
Petroleum	69
Building materials ..	125
Mica	31
Precious stones ..	19
Salt, etc.	108
Others	7
Total ..	1,000

Industry.

126. Industry occupies 10% of India's workers as compared to 11% in 1921. The figures throughout the thirteen orders in this sub-class have a general correspondence to those of 1921 and are remarkable more for their consistency than for any change during the decade. Even in **Textiles** (Order 5), in which some marked increase might have been expected, the increase according to the returns is only 2% in actual workers, while for those whose employment is subsidiary no 1921 figures are available for comparison. Here again the slight decrease in the number of female workers, which is of course more than balanced by an increase in male, may possibly be accounted for by returns in sub-classes X or XI, but this decrease is one of less than 5,000 and therefore of no very great significance. The one industrial order in which a marked increase has taken place is No. 16, **Production and Transmission of Physical Force**, that is in heat, light, electricity, motive power, etc. This Order in 1921 occupied 11,514 actual workers, whereas the number has now risen to 23,650 in addition to which 1,257 have a subsidiary occupation under this head. If a more detailed examination be made, the same feature of a general constancy in the industrial returns is obvious, most groups showing a small increase though here and there a change is noticeable. Thus there has been an increase in silk spinners and weavers (group 47 in 1931, groups 34 and 35 in 1921) from 80,700 to 114,500 and 9,000 more have returned it as a subsidiary occupation. On the other hand group 50, *Lace, Crêpe, Embroideries etc., and insufficiently described Textile Industries*, has

Distribution of 1,000 workers in sub-class III, Industry.

Order.	Persons.
5. Textiles	258
6. Hides, skins, etc. ..	21
7. Wood	113
8. Metals	48
9. Ceramics	68
10. Chemical products, etc.	42
11. Food Industries ..	95
12. Industries of dress, etc.	223
13. Furniture	1
14. Building	40
15. Construction of means of Transport.	2
16. Production and Transmission of Heat, Power, etc.	1
17. Miscellaneous and Undefined.	88
Total ..	1,000

shrunk from 174,000 in 1921 to 32,000 in 1931, even when those employed in it as a subsidiary occupation only have been included. Similarly in Order 8, **Metals**, group 57, *Smelting, Forging and Rolling of Iron and Other Metals*, shows a noticeable decrease, while there is a pronounced increase in group 62, *Workers in Mints, Die-sinkers, etc.* In Order 9 (**Ceramics**) again *Brick and Tile Makers*, have decreased while *Other Workers in Ceramics* have increased, a difference possibly due merely to classification. Such an explanation however does not apply to the changes in order 10, **Chemical Products, etc.**, where there has been an increase of over 130% in group 66, *Manufacture of Matches, Fire-works and Other Explosives*, and of over 120% in group 67, *Manufacture of Aerated and Mineral Waters and Ice.* In Order 11, **Food Industries** the very marked decline in the numbers of group 76, *Toddy drawers*, and the decline, somewhat less marked, in group 77, *Brewers and Distillers*, was only to be expected and possibly represents an unwillingness to admit to an unpopular occupation as well as a real reduction in the numbers following these callings. On the other hand there has been a very considerable increase indeed in manufacturers of tobacco, an indication of the very rapid extension of the *biri*-making industry to which attention has already been drawn above (paragraph 123), and in regard to which the Census Superintendent for Madras writes as follows :—

	Number of actual workers in	
	1921.	1931.
Toddy drawers	254,377	186,915
Brewers and Distillers.	6,893	5,953
Tobacco manufacturers.	47,857*	147,197†

*Includes manufacturers of ganja and opium.

†Includes 10,785 for whom the occupation is subsidiary to some other.

"A general growth in the smoking habit has been noticeable to ordinary observation during the decade. The application of a tariff and the setting up of tobacco manufacture in or adjoining the presidency (Bangalore is a notable centre) led to considerable encouragement of cigarette smoking. At the end of the decade came the boycott of imported cigarettes and the *Beedi* came into its own. This is in essence a small quantity of powdered tobacco rolled in a special kind of leaf (usually imported from Bombay). Much *beedi* making is done as house industry, notably by Muslim women. It is among Muslims that *beedi* smoking seems to be most common, a fact borne out by the prominence of tobacco dealers in Malabar and North Arcot. *Beedis* are actually exported from Madras to Burma and the Malay States."

The 1921 figures given in the margin above include manufacturers of opium and *ganja* whose figure is not separable in the 1921 classification. These two have been returned separately this time and number only 604 taken together. Order 13, **Furniture Industries**, shows a considerable rise, from 10,000 to 17,000, in group 88, *Cabinet-makers, Carriage-painters, etc.*, while order 14, **Building Industries**, amalgamated this time into one group, shows a marked decline, 812,000 to 693,000, even when those following them as a subsidiary occupation are added. In Order 15, **Construction of Means of Transport**, the numbers in group 91, *Persons engaged in making, assembling or repairing motor vehicles or cycles*, shows a very natural increase from less than 5,000 to more than 13,000, exclusive of another 800 for whom it is a subsidiary occupation. *Carriage-makers and Wheelwrights* (group 92) however show no decrease but on the contrary quite a normal rise in numbers. *Ship and Boat Builders* (group 93), with whom aeroplane builders, if there are any, are classified, do nevertheless show an unmistakable decrease, and at least one Census Superintendent has pointed out that there has been a definite decline in the use of water transport. Reference has already been made to Order 16, and the final order in this sub-class, No. 17, **Miscellaneous and undefined industries** shows an increase in groups 96, *Makers of Musical Instruments*, and 97, *Makers of Clocks and Surgical or Scientific Instruments* but a decrease in group 98, *Makers of Jewellery and Ornaments.* Group No. 100, *Scavenging* also shows a decrease.

127. An increase in the proportion of workers employed in transport has already been indicated (paragraph 119). The distribution of 1,000 workers in transport is **Transport.**

shown in the marginal table. The sub-class is classified in five orders of which 20, **Transport by Road,** occupies more than double the numbers of any other. It is this order which shows the principal change in this sub-class since 1921, and the change is primarily due to the development in road communications and motor traffic that has taken place during the decade. Workers employed in group No. 106, *Labour on Roads and Bridges* have increased from 285,000 to 424,000 in addition to which there are 74,500 occupied in it as a subsidiary occupation. Group No. 107, *Owners, Managers and Employees connected with Mechanically Driven Vehicles,* has increased from 20,000 to 84,000, and there are another 5,000 who find a subsidiary occupation in it. At the same time, though group 109, *Palki-bearers and owners, etc.,* shows a decrease from 66,000 to 57,500, which is less than might be expected (and there are 23,000 others for whom it is a subsidiary occupation), there is no decrease in group 108, *Owners, etc., of vehicles other than mechanical.* On the contrary they have increased from 364,500 to 405,000, and another 201,000 find in it a subsidiary occupation, a growth which confirms the increase in group 92 (paragraph 126). *Owners and drivers of pack-animals* too (group 110) show just a slight increase without taking into account those for whom this occupation is subsidiary. Turning to Order 21, **Transport by Rail,** it is clear at once that the increase of the numbers occupied in road transport has not been at the expense of the numbers of those occupied in rail traffic, and the decrease in the latter in respect to the former is not absolute, but merely a relatively lower rate of increase, since railway employees of all kinds have increased, and group 113 *Labour employed on Railways* has risen from 179,000 to 286,000, in addition to which there are 30,000 for whom it provides a subsidiary occupation. The same applies to Order 19, **Transport by Water,** under which group 104, *Labour employed on Harbours, Docks, Rivers and Canals,* has increased from 29,000 to 55,000, exclusive of 4,000 for whom it is subsidiary to some other occupation, though on the other hand ship and boatbuilders have decreased and there is some reason for supposing that transport by water has decreased. Apparently the decrease is in the use of water for internal transport, and the increase in harbours for external transport by sea, *e.g.*, at Vizagapatam and in Cochin. Order 22, **Post Office, Telegraph and Telephone Services** likewise occupies an increased number of persons, and the only order in this sub-class which shows an absolute decrease is perhaps unexpectedly No. 18, **Transport by Air,** which shows a decrease from 335 to 306 leaving out of account 24 persons who found in it a subsidiary occupation in 1931. The numbers are of course insignificant in any case. As regards the increase of labour on transport generally it should perhaps be pointed out that part of this increase may merely be due to the fact that the census fell earlier this time than in 1921 and therefore nearer the height of the working season. How far this affected the numbers it is impossible to say, but it is not likely to have accounted for more than a fraction of the increase.

Distribution of 1,000 Transport workers.

Order.	1931.	*1921.*
Transport by Road.	580	*513*
Transport by Rail	244	*270*
Transport by Water.	144	*178*
Post, Telegraphs, etc.	32	*39*

Trade.

128. The figures for Trade generally show a slight absolute decrease as compared with 1921, apart from the relative decrease shown by the table in paragraph 119 above, for the number of workers occupied declined from just over to just under eight million, taking no account, of course, of the million and a half who returned trade of some kind as a subsidiary occupation in 1931. It is tempting to put down this decline to the economic depression generally, which was possibly making itself felt in individual trades before the effect was perceptible to the community as a whole. Such a reason can perhaps be safely relied on to explain the fall in the number of workers occupied in group 115, *Bank managers, Money-lenders, etc., and their employees* (from 345,000 in 1921 to 329,500 in 1931, when there were also 153,000 who found in it a subsidiary occupation), and in group 116, *Brokers, Commission Agents, Commercial travellers, etc.,* which declined from 91,000 to 64,000. Seventeen orders are included in sub-class V, Trade, and the marginal table below shows their comparative strength in 1931. Trade in foodstuffs, otherwise than

in hotels, eating houses, cookshops, etc., accounts for nearly half of the whole subclass, and if the numbers occupied in the different orders be scrutinized generally it will be seen that the decrease is by no means equally distributed. Orders No. 26, **Trade in skin leather and furs**, 27, **Trade in Wood**, 28, **Trade in Metals**, 29, **Trade in Pottery, Brick and Tiles**, 30, **Trade in Chemical Products**, 31, **Hotels, Cafés, Restaurants, etc.**, and 38, **Trade in Articles of Luxury and in those pertaining to Letters and the Arts and Sciences**, all show an increase, if in most cases only a slight one. On the other hand Orders 23, **Banks, etc.**, 24, **Brokerage**, 25, **Trade in Textiles**, 32, **Other trade in Foodstuffs**, 33, **Trade in Clothing and Toilet Articles** 34, **Trade in Furniture**, 35, **Trade in Building Materials**, 36, **Trade in Means of Transport** and 37, **Trade in Fuel**, all show an absolute decline on the number of workers occupied, though here again it is in many cases slight. Of the increases the most noticeable is that in group 127, *Owners and managers of hotels, cookshops, etc., and their employees*, a rise of 53 per cent. from 99,000 to 152,000, indicating probably a greater mobility of the population and a definite change in manners. The other increases are none of them particularly significant unless it be that in Order 38, which is mainly occasioned by an increase in group 148, *Publishers, Booksellers, Stationers, Dealers in Music, etc.*, indicative of the gradual spread of literacy. Among the decreases the heaviest is that in Order 32, where workers occupied in trade in foodstuffs apart from eating houses have fallen from 4,258,000 to 3,837,000. In spite of an increase in makers of furniture, group 88 (paragraph 126 above), workers in Order 34 have declined in number from 72,000 to 61,000, possibly a change in classification only, and workers in Order 35 from 39,000 to 22,000. In Order 36 there has naturally been a rise in group 142, *Dealers and hirers in mechanical transport*, from 3,000 to 8,200, although group 143, *Dealers and hirers in other carriages, carts, boats, etc.* (compare groups 92 and 108) shows a rise of not far from double, from 19,000 to 35,600. As already pointed out however this order as a whole has fallen, the fall being determined by the decrease in group 144, *Dealers and hirers in elephants, camels, horses, asses, mules, etc.*, the decrease in which has so far overbalanced the increase in 142 and 143 as to cause a decrease in the three combined from 135,000 to 111,000. In Order 39, **Trade of other sorts**, the rise of over 209,000 is almost entirely accounted for by the rise in group 150, *General store keepers and shopkeepers otherwise unspecified.*

Distribution of 1,000 workers in subclass V, Trade.

Order No.	Persons.
23. Banks, etc.	52
24. Brokerage, etc. ..	8
25. Textiles	56
26. Hides, etc.	11
27. Wood	21
28. Metals	3
29. Pottery, Bricks, etc. ..	6
30. Chemical Products ..	8
31. Hotels, etc.	59
32. Other Foodstuffs ..	485
33. Clothing and Toilet ..	13
34. Furniture	7
35. Building Materials ..	3
36. Means of Transport ..	15
37. Fuel	40
38. Luxury, letters, etc. ..	26
39. Miscellaneous	187

Public Force and Administration.

129. Turning to sub-class VI, Public Force, the decrease shown in paragraph 119 above is not only relative but absolute, since the total number employed under this head, exclusive of those (99,900) who find a subsidiary occupation therein (mostly as villlage watchmen) for whom no comparative figures are available, has fallen from 1,040,000 to 841,000. The decrease in the **Army**, both Imperial and State Forces has been one of 28 per cent., the figures having fallen from 440,000 to 317,000. The **Navy** and **Air Force** have increased, but the numbers are insignificant, amounting only to about 3,000 in all. *Police* (group 157) have increased by 7 per cent. only, less than the rate of increase of the total population, while *village watchmen* (group 158) have decreased by 95,700, a figure which suggests that this occupation has been returned at this census as subsidiary by about that number who returned it in 1921 as their principal occupation. In sub-class VII, again taking no account of those who found in 1931 only a subsidiary livelihood in **Public Administration**, there has been an absolute decrease of 10,000, as well as a relative decrease, at any rate in the figures returned, though as the decrease in actual workers has been primarily determined by a decrease of 52,000 in group

Distribution of 1,000 persons occupied in Public Force and Administration.

Navy and Air Force ..	2
Army	158
Police	155
Village watchmen	135
Service of the state ..	185
Service of Indian and Foreign States.	133
Municipal service	72
Village officials and servants	160

162, *Village officials and servants other than watchmen*, an occupation returned in 1931 as subsidiary by 112,000 persons, it is not unlikely that the decrease has been caused by the return of the occupation as subsidiary instead of principal. Of the other three groups in this order group 160, *Service of Indian and Foreign States*, shows a decrease of 17,000, while group 159, *Service of the State*, shows an increase of over 8,000. The returns under these two heads are often confused, and it is impossible to be certain either that the decrease in group 160 or the increase in group 159 does not really refer to the other group in each case, but taken together the decrease in the service of the state amounts to nearly 9,000. On the other hand there has been an unequivocal rise amounting to just under 51,000 in group 161, *Municipal Service*, which now affords an occupation to 145,000 persons, as against 94,000 in 1921, to say nothing of some 6,000 who find a subsidiary occupation in the same group. This increase is clearly due to the extension of local self-government.

Professions and Liberal Arts.

130. The total returns under sub-class VIII show an increase over 1921 of about 229,000, as well as 414,000 who find a subsidiary occupation in this sub-class which is divided into five orders. Of these Orders No. 45, **Religion** shows a decrease although but a slight one of 14,600 persons, while 220,600 return a subsidiary occupation in this order. The majority of persons returning occupations in this order are in group 163, *Priests, ministers, etc.*, No. 164, *Monks, Nuns and Religious Mendicants*, coming next (there is one of these to every 664 workers in India), then No. 166, *Temple Servants, etc.*, and finally group 165, *Other Religious Workers*. Order No. 49, **Letters, Arts and Sciences** also shows a decrease (—19,000). This is a heterogeneous order including, as it does actors, dancers, entertainers of all sorts, musicians, artists, scientists, witches, astrologers, economists, journalists and public scribes. In this order a very noticeable decrease, half as much again that in the order as a whole, is found under group 177, *Architects, Surveyors, Engineers and their employees* (*not being State servants*). The decrease here of over 26,000 persons is difficult to account for, but may conceivably be correlated with the decrease in building industries already pointed out. They cannot all have been employed on building New Delhi in 1921 and have gone out of business since, nor can they have returned their employment as subsidiary, as that total in this group amounts to 1,430 only. Probably the 1921 returns included those who were State servants, but here again there is no corresponding increase except under group 161, municipal servants, where part of this decrease may perhaps be sought. Group 182, *Musicians, Actors, Dancers, etc.*, shows a decrease in females only. The other orders in this sub-class show an increase. The most pronounced is that in order 47, **Medicine**, which shows an increase of 63,000, *i.e.* of 25 per cent., the number following occupations in this order (apart from those for whom they are subsidiary 50,900) being now 318,600 against 255,500 in 1921. Much of the increase is represented by females. The distribution of 1,000 workers in this order is shown in the marginal table. There has also been an increase in order 48, **Instruction**, of 49 per cent., group 174, *Professors and Teachers of all kinds* having risen from 310,000 to 462,800, apart from 51,000 who find a subsidiary occupation in this category. Group 175, *Clerks and servants connected with education*, has risen almost proportionally. Order 46, **Law**, has also increased by 36 per cent. from 98,000 to 133,000 in addition to which there are 10,000 who find a subsidiary occupation here. Including the latter this gives a whole attorney of some kind to every 1,100 workers.

Distribution of 1,000 occupations in sub-class VIII.

Religion	458
Law	53
Medicine	135
Instruction	204
Letters, Arts, and Sciences ..	150

Distribution of 1,000 workers in Medicine.

Registered practitioners (including oculists).	241
Unregistered persons practising the healing art.	381
Dentists ..	11
Midwives, vaccinators, compounders, nurses, etc.	355
Veterinary surgeons ..	12

Private Income and Domestic Service.

131. In class D, Miscellaneous, there are six orders. In the first of these, No. 50, **Persons living on their income**, an order which includes pensioners, scholarships holders, etc., the number has risen since 1921 in proportion to the general population, the proportion to the total of workers having risen from 13 to 14 per 10,000,

excluding 65,000 in 1931 who had some definite occupation as well. It may however be noted that the number of females returned in this order has fallen in absolute figures, though if to the 1931 total be added the total who returned living on their income as subsidiary to some other occupation, the 1921 total of females in this order (50,809) is almost equalled by the 50,535 obtained in 1931. This suggests that some of those who returned a private income as their means of subsistence in 1921 have this time returned some other occupation, perhaps domestic service, as their principal means of subsistence in 1931. It has already been pointed out that this order 51, **Domestic Service** has been unnaturally swollen in 1931 by returns of females at the expense of other orders, in particular probably of agriculture, but no doubt also of others, including possibly not only those just referred to but also dancing girls and prostitutes, both of which categories show a noticeable decrease in 1931. Even the number of male domestic servants shows a remarkable increase since 1921, from 1,710,000 to 2,095,000, an increase of 22 per cent. or, if working dependants be excluded in 1931, of 6 per cent. The apparent increase however in female domestic servants is by 971 per cent. from 822,000 to 8,804,000. Clearly this can only be explained by the resort to a return of domestic service as a substitute for a return of some other kind, and the 1931 figure that is really comparable with the 1921 return of female domestic servants is that of the 887,000 who have returned it as their principal occupation, this occupation being returned as dependent by the remaining 7,917,000, in addition to which 1,533,400 females have returned domestic service as a subsidiary occupation. The only other point to be noticed in this order is the increase in group 186, *Private motor-drivers and cleaners* from 18,800 to 68,000, a rise consistent with that in groups 107 and 142 already noticed.

Insufficiently Described and Unproductive Occupations.

132. In order 52, which contains four groups of **Insufficiently described occupations**, only one point calls for comment here and that is the disappearance of some 70,000 women from group 188, *Manufacturers, Businessmen and Contractors otherwise unspecified*, since 1921. Here again they have probably gone to Order 51, which has formed a convenient receptacle for all sorts of women whose occupation is not easy to define in precise terms. That the general increase in order 52 is in part due to prevailing unemployment has already been suggested in paragraph 119 above. There remains sub-class XII euphemistically described as 'Unproductive'. In this sub-class Order 53, **Inmates of Jails, Asylums and Almshouses,** shows a regrettable increase of 37 per cent., that is from 128,393 in 1921 to 176,128 in 1931. Of the latter figure approximately 140,000 are prisoners undergoing rigorous imprisonment, but as the provinces and states in some cases misunderstood the instructions and amalgamated the figures of convicts sentenced to simple imprisonment with those sentenced to rigorous the figure can only be accepted with caution. In addition to the above there appear in the returns 238 mysterious persons who find a subsidiary occupation in being an inmate of some almshouse, jail, or perhaps more plausibly (for there is no 'Cat and Mouse' act in force in India) asylum. On the other hand in Order 54, **Beggars, Vagrants, Prostitutes,** group 193, *Beggars and Vagrants* shows a fall of 20 per cent. from 1,593,000 to 1,397,000, which latter figure includes the 115,000 odd who returned beggary as a subsidiary means of subsistence, while in group 194, *Procurers and Prostitutes*, there has been a fall in the returns of 23 per cent., from 94,000 to 72,500, the latter figure including those for whom this occupation affords only a subsidiary livelihood. How far this is a real decline and how far it is due to an increasing distaste for returning a disreputable occupation it is impossible to say, but perhaps the two alternatives are in either case symptomatic of the same tendency, and the existence of the one involves the other, at any rate sooner or later. The last group 195, *Other unclassified non-productive industries* shows a slight decrease in the number of males returned, unless subsidiary occupations are included, but an in explicably high increase of females entirely in the form of working dependants. The group includes among others a certain number of persons who returned their occupation as 'Congress worker', but this can hardly account for those working dependants whose principals are apparently returned under some other occupation.

Section iii.—Occupation by Caste and Race.

Occupation and Caste.

133. Table XI contains some figures of certain castes by occupations, showing the numbers dealt with, the numbers following the traditional caste occupations, and

the numbers following other occupations, the latter classified on broad lines by sub-classes. This table was an optional table and was not compiled by all provinces, and where compiled was not exhaustive, so that the figures compiled for the India table offer only samples, the method having been to compile it as far as possible for all castes for which figures were available and which were well distributed by provincial tables, omitting those castes tabulated for Table XI in only one or two provinces. This table was omitted entirely in 1921 but it is of some importance as indicating the extent of the tendency of castes to abandon hereditary callings and take up others. In certain directions of course this tendency has long existed. Agriculture for instance is a respectable calling and it is one which at any rate can be conveniently combined with many caste occupations, and the tendency to substitute agriculture for other pursuits must be of very long-standing and many castes whose names imply some other occupation are now mainly agricultural. Possibly many have always been so, for the typical Indian village system, in which various occupational castes pursue their callings in a single village for the benefit of the whole village community, seems to be of comparatively late growth and is possibly the result of deliberate administrative arrangements. Indeed the Bengal Report for 1901 points out how in Orissa where a new village is formed the presence of the necessary occupational castes required to make the village self-contained and self-supporting is obtained by free grants of land known as *chākrān jagir*. On the other hand the Jatakas suggest a distribution of occupation by village, mentioning a village of wheelwrights, a village of potters, etc. Such a distribution appears more primitive in type and would have contributed in no small degree to the original stabilization of functional castes. Functional societies of this kind are likely to have been extremely favourable to the perpetuation of inherited aptitude and to the secretion of processes and technique. Such a distribution of function by village is still found in Burma and in a very active form in the hill districts between Burma and Assam, particularly in the unadministered areas.

Apart from agriculture the abandonment of caste functions is operative in particular directions to the exclusion of others. There is no tendency for instance for other castes to encroach on the dhobi's monopoly of washing, though all castes aim at entering the learned professions and in particular government service, and there is a similar tendency to give up caste callings for trade. The tendency to leave caste callings for learned professions is one which is making itself severely felt by those castes, Brahmans and Kayasthas in particular, who have in the past held a virtual monopoly of them. They are being submitted to severe competition in the special callings to which they have been accustomed to work for their livelihood, and the pinch is accentuated by the policy approved by Government of communal representation in Government service, a policy not confined to administrative posts but extended to clerical ones, and detrimental to those castes whose hereditary function is clerical, and who have neither aptitude nor inclination for industry or trade, as well as to the performance of the functions themselves.

A general examination of the castes tabulated by occupation enables the position to be roughly summarized as follows :—In the majority of cases about half the males tabulated retain their traditional occupation and varying numbers up to, but rarely exceeding, a quarter, have other subsidiary occupations. About a quarter or less of the half that have abandoned their hereditary occupations as their principal means of subsistence retain them as subsidiary. One or two exceptions are worth stating. Of the Chamars hardly more than one in thirteen return their traditional occupation as the principal means of subsistence and only one in 40 as the subsidiary means. The Bhats again form a similar exception and not unnaturally, as the demand for genealogists is probably less than that for tanners and their occupation as heralds is one of the past entirely. In the case of Jhinwars again the greater decrease of the numbers following their traditional occupation is the natural corollary of the decline in the number of palki owners and bearers already noticed in regard to the figures of group 109 in Order 20 (Transport by Road), while the extremely limited extent to which the mali pursues his hereditary calling of gardener is perhaps dictated by the limited numbers of persons who can afford to employ gardeners. On the other hand the agricultural communities of Jat and Kurmi have not gone nearly so far as to abandon their hereditary occupation to the extent of 50 per cent. Turning to the callings adopted, agriculture is easily the most popular, though industry, trade and transport claim fair numbers and

many appear as 'insufficiently described'. The Chamar is mostly agricultural, as also the Bhat and the Mali, while the Nai is drawn to professions and liberal arts and to domestic service.

Occupation and Race.

134. The second part of Table XI deals with the occupations of Europeans and Anglo-Indians. Omitting all dependants and taking males only of workers, 66 per cent. of Europeans are employed in Public Force — that is in the Army, Navy, Air Force or Police. The next highest proportions are occupied in Transport, 7·5 per cent., Industry, 4·5 per cent., Professions and Liberal Arts 4 per cent., Public Administration 4 per cent., Trade 4 per cent., and Agriculture 3 per cent. Of European females 61 per cent. are occupied in Professions and Liberal Arts. Anglo-Indian males find their most frequent occupation in Transport 34 per cent., Industry coming next with 11 per cent., then Public Administration with 10 per cent. In the case of females 38 per cent. are occupied in Professions and Liberal Arts. The marginal table shows the occupational distribution of 1,000 each of European and Anglo-Indian males. The large proportion of Europeans in sub-class VI is due of course to the presence in India of British troops.

Distribution by principal occupation of 1,000 European and Anglo-Indian males.

Sub-class.	Europeans.	Anglo-Indians.
I.—Agriculture etc.	34	32
II.—Minerals ..	16	18
III.—Industry ..	45	107
IV.—Transport ..	75	336
V.—Trade ..	39	94
VI.—Public Force	662	56
VII.—Public Administration.	44	103
VIII.—Professions and Arts.	45	84
IX.—Private Income.	12	50
X.—Domestic service.	5	31
XI.—Insufficiently described.	23	85
XII.—Unproductive	..	4

Scheme of occupations for the Census of 1931 :—

Class.	Sub-class.	Order.	Group.
A.—*PRODUCTION OF RAW MATERIALS.*	I—EXPLOITATION OF ANIMALS AND VEGETATION.	1. *Pasture and Agriculture*— (*a*) Cultivation ..	1. Non-cultivating proprietors taking rent in money or kind.
			2. Estate agents and managers of owners.
			3. Estate agents and managers of Government.
			4. Rent collectors, clerks, etc.
			5. Cultivating owners.
			6. Tenant cultivators.
			7. Agricultural labourers.
			8. Cultivators of *jhum, taungya* and shifting areas.
		(*b*) Cultivation of special crops, fruit, etc., (Planters, managers, clerks and labourers).	9. Cinchona.
			10. Coconut.
			11. Coffee.
			12. Ganja.
			13. Pan-vine.
			14. Rubber.
			15. Tea.
			16. Market gardeners, flower and fruit growers.
		(*c*) Forestry ..	17. Forest officers, rangers, guards, etc.
			18. Woodcutters and charcoal burners.
			19. Collectors of forest produce.
			20. Collectors of lac.

Class.	Sub-class.	Order.	Group.
A.—*PRODUCTION OF RAW MATERIALS*—contd.	I.—EXPLOITATION OF ANIMALS AND VEGETATION—*contd.*	(*d*) Stock raising ..	21. Cattle and buffalo breeders and keepers.
			22. Breeders of transport animals.
			23. Herdsmen, shepherds and breeders of other animals.
		(*e*) Raising of small animals and insects.	24. Birds, bees, etc.
			25. Silkworms.
			26. Lac cultivation.
		2. *Fishing and Hunting.*	27. Fishing and pearling.
			28. Hunting.
	II.—EXPLOITATION OF MINERALS.	3. *Metallic Minerals.*	29. Gold.
			30. Iron.
			31. Lead, silver and zinc.
			32. Manganese.
			33. Tin and wolfram.
			34. Other metallic minerals.
		4. *Non-Metallic Minerals.*	35. Coal.
			36. Petroleum.
			37. Building materials (including stone, materials for cement-manufacture and clays).
			38. Mica.
			39. Precious and semi-precious stones.
			40. Salt, saltpetre and other saline substances.
			41. Other non-metallic minerals.
B.—*PREPARATION AND SUPPLY OF MATERIAL SUBSTANCES.*	III.—INDUSTRY ..	5. *Textiles*	42. Cotton ginning, cleaning and pressing.
			43. Cotton spinning, sizing and weaving.
			44. Jute pressing, spinning and weaving.
			45. Rope, twine string and other fibres.
			46. Wool carding, spinning and weaving.
			47. Silk spinning and weaving.
			48. Hair (horse-hair), etc.
			49. Dyeing, bleaching, printing, preparation and sponging of textiles.
			50. Lace, crêpe, embroideries, fringes, etc., and insufficiently described textile industries.
		6. *Hides, skins and hard materials from the animal kingdom.*	51. Working in leather.
			52. Furriers and persons occupied with feathers, and bristles; brush-makers.
			53. Bone, ivory, horn, shell, etc. workers (except buttons).

Class.	Sub-class.	Order.	Group.
B.—*PREPARATION AND SUPPLY OF MATERIAL SUBSTANCES—contd.*	III.—INDUSTRY—*contd.*	7. *Wood* ..	54. Sawyers. 55. Carpenters, turners and joiners, etc. 56. Basket makers and other industries of woody materials, including leaves, and thatchers and builders working with bamboo, reeds or similar materials.
		8. *Metals* ..	57. Smelting, forging and rolling of iron and other metals. 58. Makers of arms, guns, etc. 59. Blacksmiths, other workers in iron, makers of implements. 60. Workers in brass, copper and bell metal. 61. Workers in other metals (except precious metals). 62. Workers in mints, die-sinkers, etc.
		9. *Ceramics* ..	63. Potters and makers of earthenware. 64. Brick and tile makers. 65. Other workers in ceramics.
		10. *Chemical products properly so-called and analogous.*	66. Manufacture of matches, fireworks, and other explosives. 67. Manufacture of aerated and mineral waters and ice. 68. Manufacture and refining of vegetable oils. 69. Manufacture and refining of mineral oils. 70. Others.
		11. *Food Industries* ..	71. Rice pounders and huskers, and flour grinders. 72. Grain parchers, etc. 73. Butchers. 74. Makers of sugar, molasses and gur. 75. Sweetmeat and condiment makers. 76. Toddy drawers. 77. Brewers and distillers. 78. Manufacturers of tobacco. 79. Manufacturers of opium. 80. Manufacturers of ganja. 81. Others.
		12. *Industries of dress and the toilet.*	82. Boot, shoe, sandal and clog makers. 83. Tailors, milliners, dressmakers and darners. 84. Embroiderers, hat-makers and makers of other articles of wear. 85. Washing and cleaning. 86. Barbers, hairdressers and wigmakers. 87. Other industries connected with the toilet.

Class.	Sub-class.	Order.	Group.
B.—*PREPARATION AND SUPPLY OF MATERIAL SUBSTANCES*—contd.	III.—INDUSTRY—*concld.*	13. *Furniture Industries.*	88. Cabinet-makers, carriage painters, etc. 89. Upholsterers, tent-makers, etc.
		14. *Building Industries.*	90. Lime burners, cement workers; Excavators and well sinkers; Stone cutters and dressers; Bricklayers and masons; builders (other than buildings made of bamboo or similar materials); Painters, decorators of houses, tilers, plumbers, etc.
		15. *Construction of means of transport.*	91. Persons engaged in making, assembling or repairing, motor vehicles or cycles. 92. Carriage, cart, palki, etc., makers and wheelwrights. 93. Ship, boat, aeroplane builders.
		16. *Production and transmission of physical forces.*	94. Heat, light, electricity, motive power, etc.; gas works and electric light and power.
		17. *Miscellaneous and undefined Industries.*	95. Printers, engravers, bookbinders, etc. 96. Makers of musical instruments. 97. Makers of clocks and surgical or scientific instruments, etc. 98. Makers of jewellery and ornaments. 99. Other miscellaneous and undefined industries (toy-making, taxidermy, etc.) 100. Scavenging.
	IV—TRANSPORT ..	18. *Transport by air* ..	101. Persons concerned with aerodromes and aeroplanes.
		19. *Transport by water*	102. Ship-owners, boat-owners and their employees, officers, mariners, etc. Ship-brokers, boatmen and towmen. 103. Persons (other than labourers) employed in harbours, docks, rivers and canals, including pilots. 104. Labourers, employed on harbours, docks, rivers and canals.
		20. *Transport by road*	105. Persons (other than labourers) employed on the construction and maintenance of roads and bridges. 106. Labourers employed on roads and bridges. 107. Owners, managers and employees (excluding personal servants) connected with mechanically driven vehicles (including trams).

Class.	Sub-class.	Order.	Group.
B.—*PREPARATION AND SUPPLY OF MATERIAL SUBSTANCES*—contd.	IV.—TRANSPORT—*contd.*	20. *Transport by road*—contd.	108. Owners, managers and employees (excluding personal servants) connected with other vehicles.
			109. Palki, etc., bearers and owners.
			110. Pack elephant, camel, mule, ass and bullock, owners and drivers.
			111. Porters and messengers.
		21. *Transport by rail*	112. Railway employees of all kinds other than coolies.
			113. Labourers employed on railway construction and maintenance and coolies and porters employed on railway premises.
		22. *Post Office, Telegraph and Telephone services.*	114. Post Office, Telegraph and Telephone services.
	V.—TRADE ..	23. *Banks, Establishments of credit, exchange and insurance.*	115. Bank managers, money-lenders, exchange and insurance agents, money changers and brokers and their employees.
		24. *Brokerage, commission and export.*	116. Brokers, commission agents, commercial travellers, warehouse owners and employees.
		25. *Trade in textiles*	117. Trade in piece-goods, wool, cotton, silk, hair and other textiles.
		26. *Trade in skins, leather and furs.*	118. Trade in skins, leather, furs, feathers, horn, etc., and the articles made from these.
		27. *Trade in wood* ..	119. Trade in wood (not firewood).
			120. Trade in barks.
			121. Trade in bamboos and canes.
			122. Trade in thatches and other forest produce.
		28. *Trade in metals*	123. Trade in metals, machinery, knives, tools, etc.
		29. *Trade in pottery, bricks and tiles.*	124. Trade in pottery, bricks and tiles.
		30. *Trade in chemical products.*	125. Drugs, dyes, paints, petroleum, explosives, etc.
		31. *Hotels, cafés, restaurants, etc.*	126. Vendors of wine, liquors, aerated waters and ice.
			127. Owners and managers of hotels, cook-shops, sarais, etc. (and employees).
			128. Hawkers of drink and food stuffs.
		32. *Other trade in food stuffs.*	129. Grain and pulse dealers.
			130. Dealers in sweetmeats, sugar and spices.

Class.	Sub-class.	Order.	Group.
B.—*PREPARATION AND SUPPLY OF MATERIAL SUBSTANCES*—concld.	V.—TRADE—*contd.*	32. *Other trade in food stuffs*—contd.	131. Dealers in dairy products, eggs and poultry. 132. Dealers in animals for food. 133. Dealers in fodder for animals. 134. Dealers in other food stuffs. 135. Dealers in tobacco. 136. Dealers in opium. 137. Dealers in ganja.
		33. *Trade in clothing and toilet articles.*	138. Trade in ready-made clothing and other articles of dress and the toilet (hats, umbrellas, socks, ready-made shoes, perfumes, etc.).
		34. *Trade in furniture*	139. Trade in furniture, carpets, curtains and bedding. 140. Hardware, cooking utensils, porcelain, crockery, glassware, bottles, articles for gardening, etc.
		35. *Trade in building materials.*	141. Trade in building materials (other than bricks, tiles and woody materials).
		36. *Trade in means of transport.*	142. Dealers and hirers, in mechanical transport, motors, cycles, etc. 143. Dealers and hirers in other carriages, carts, boats, etc. 144. Dealers and hirers of elephants, camels, horses, cattle, asses, mules, etc.
		37. *Trade in fuel* ..	145. Dealers in firewood, charcoal, coal, cowdung, etc.
		38. *Trade in articles of luxury and those pertaining to letters and the arts and sciences.*	146. Dealers in precious stones, jewellery (real and imitation), clocks, optical instruments, etc. 147. Dealers in common bangles, bead necklaces, fans, small articles, toys, hunting and fishing tackle, flowers, etc. 148. Publishers, booksellers, stationers, dealers in music, pictures, musical instruments and curiosities.
		39. *Trade of other sorts*	149. Dealers in rags, stable refuse, etc. 150. General store-keepers and shopkeepers otherwise unspecified. 151. Itinerant traders, pedlars, and hawkers (of other than food, etc.) 152. Other trades (including farmers of pounds, tolls and markets)

Class.	Sub-class.	Order.	Group.
C.—*PUBLIC ADMINISTRATION AND LIBERAL ARTS.*	VI.—PUBLIC FORCE	40. *Army* ..	153. Army (Imperial). 154. Army (Indian States).
		41. *Navy*	155. Navy.
		42. *Air Force* ..	156. Air Force.
		43. *Police* ..	157. Police. 158. Village watchmen.
	VII.—PUBLIC ADMINISTRATION.	44. *Public Administration.*	159. Service of the State. 160. Service of Indian and Foreign States. 161. Municipal and other local (not village) service. 162. Village officials and servants other than watchmen.
	VIII.—PROFESSIONS AND LIBERAL ARTS.	45. *Religion* ..	163. Priests, ministers, etc. 164. Monks, nuns, religious mendicants. 165. Other religious workers. 166. Servants in religious edifices, burial and burning grounds, pilgrim conductors, circumcisers, etc.
		46. *Law*	167. Lawyers of all kinds, including qazis, law agents and mukhtiars. 168. Lawyers' clerks, petition-writers, etc.
		47. *Medicine* ..	169. Registered medical practitioners including oculists. 170. Other persons practising the healing arts without being registered. 171. Dentists. 172. Midwives, vaccinators, compounders, nurses, masseurs, etc. 173. Veterinary surgeons.
		48. *Instruction* ..	174. Professors and teachers of all kinds. 175. Clerks and servants connected with education.
		49. *Letters, arts and sciences* (other than 44).	176. Public scribes, stenographers, etc. 177. Architects, surveyors, engineers, and their employees (not being state servants). 178. Authors, editors, journalists and photographers. 179. Artists, sculptors and image-makers. 180. Scientists (astronomers, botanists, etc.). 181. Astrologers, fortune-tellers, horoscope-casters, wizards, witches and mediums.

Class.	Sub-class.	Order.	Group.
C.—*PUBLIC ADMINISTRATION AND LIBERAL ARTS*—contd.	VIII.—PROFESSIONS AND LIBERAL ARTS—*contd.*	49. *Letters, arts and sciences* (other than 44)—contd.	182. Musicians (composers and performers other than military), actors, dancers, etc. 183. Managers and employees of places of public entertainment, race-courses, societies, clubs. 184. Conjurors, acrobats, recitors, exhibitors of curiosities and wild animals, etc.
D.—*MISCELLANEOUS.*	IX.—PERSONS LIVING ON THEIR INCOME.	50. *Persons living principally on their income.*	185. Proprietors (other than of agricultural land), fund and scholarship holders and pensioners.
	X.—DOMESTIC SERVICE.	51. *Domestic service*..	186. Private motor-drivers and cleaners. 187. Other domestic service.
	XI.—INSUFFICIENTLY DESCRIBED OCCUPATIONS.	52. *General terms which do not indicate a definite occupation.*	188. Manufacturers, business men and contractors otherwise unspecified. 189. Cashiers, accountants, book-keepers, clerks and other employees in unspecified offices and warehouses and shops. 190. Mechanics otherwise unspecified. 191. Labourers and workmen otherwise unspecified.
	XII.—UNPRODUCTIVE.	53. *Inmates of jails, asylums and alms houses.*	192. Inmates of jails, asylums and alms houses.
		54. *Beggars, vagrants, prostitutes.*	193. Beggars and vagrants. 194. Procurers and prostitutes.
		55. *Other unclassified non-productive industries.*	195. Other unclassified non-productive industries.

SUBSIDIARY TABLE I.

General distribution of workers at each occupation per 10,000 of total population.

Class, Sub-class and Order.	Number per 10,000 of total population. Earners (principal occupation) and working dependants.	Earners as subsidiary occupation.
Non-working dependants=5609		
All occupations	**4,391**	**425**
A. PRODUCTION OF RAW MATERIALS ..	*2,957*	*215*
I.—EXPLOITATION OF ANIMALS AND VEGETATION	**2,947**	**213**
1. Pasture and agriculture	2,923	208
(a) Cultivation	**2,766**	**185**
(b) Special crops	**47**	**7**
(c) Forestry	**9**	**3**
(d) Stock-raising	**100**	**12**
(e) Raising of small animals and insects	**1**	**1**
2. Fishing and hunting	24	5
II.—EXPLOITATION OF MINERALS	**10**	**2**
3. Metallic minerals	1	..
4. Non-metallic minerals	9	2
B. PREPARATION AND SUPPLY OF MATERIAL SUBSTANCES.	*731*	*115*
III.—INDUSTRY	**438**	**62**
5. Textiles	117	12
6. Hides, skins and hard materials from the animal kingdom.	9	1
7. Wood..	47	10
8. Metals	20	4
9. Ceramics	29	5
10. Chemical products properly so called and analogous ..	17	4
11. Food Industries	42	5
12. Industries of dress and the toilet	96	15
13. Furniture industries	1	..
14. Building industries	18	2
15. Construction of means of transport	1	..
16. Production and transmission of Physical force ..	1	..
17. Miscellaneous and undefined industries	40	4
IV.—TRANSPORT	**67**	**12**
18. Transport by air	..	..
19. Transport by water	10	1
20. Transport by road	36	10
21. Transport by rail	18	1
22. Post Office, telegraph and telephone services ..	3	..
V.—TRADE	**226**	**41**
23. Banks, establishments of credit, exchange and insurance.	9	4
24. Brokerage, commission and export	2	..
25. Trade in textiles	13	2
26. Trade in skins, leather and furs	3	1

SUBSIDIARY TABLE I—*concld.*

General distribution of workers at each occupation per 10,000 of total population.

Class, Sub-class and Order.	Number per 10,000 of total population. Earners (principal occupation) and working dependants.	Earners as subsidiary occupation.
V.—TRADE—*concld.*		
27. Trade in wood	4	2
28. Trade in metals	1	..
29. Trade in pottery, bricks and tiles	1	..
30. Trade in chemical products	2	..
31. Hotels, cafes, restaurants, etc.	14	2
32. Other trade in foodstuffs	110	20
33. Trade in clothing and toilet articles	3	..
34. Trade in furniture	2	..
35. Trade in building materials	1	..
36. Trade in means of transport	3	1
37. Trade in fuel	8	2
38. Trade in articles of luxury and those pertaining to letters and the arts and sciences.	6	1
39. Trade of other sorts	44	6
C. PUBLIC ADMINISTRATION AND LIBERAL ARTS.	*118*	*19*
VI.—PUBLIC FORCE	**24**	**3**
40. Army	9	..
41. Navy	..	..
42. Air force	..	..
43. Police	15	3
VII.—PUBLIC ADMINISTRATION	**28**	**4**
44. Public administration	28	4
VIII.—PROFESSIONS AND LIBERAL ARTS	**66**	**12**
45. Religion	29	6
46. Law	4	..
47. Medicine	9	2
48. Instruction	14	2
49. Letters, Arts and sciences (other than 44)	10	2
D. MISCELLANEOUS	*585*	*76*
IX.—PERSONS LIVING ON THEIR INCOME	**6**	**2**
50. Persons living principally on their income	6	2
X.—DOMESTIC SERVICE	**311**	**51**
51. Domestic service	311	51
XI.—INSUFFICIENTLY DESCRIBED OCCUPATIONS ..	**222**	**20**
52. General terms which do not indicate a definite occupation.	222	20
XII.—UNPRODUCTIVE	**46**	**3**
53. Inmates of jails, asylums and alms houses	5	..
54. Beggars, vagrants and prostitutes	38	3
55. Other unclassified non-productive industries ..	3	..

SUBSIDIARY TABLE II(a).

Earners (principal occupation) and working dependants.

Province, State or Agency.	Total 1,000.			Number per mille of the total population occupied as Earners (principal occupation) and as Working Dependants in											
	Non-working dependants.	Working dependants.	Earners principal occupation.	Sub-class I Exploitation of animals and vegetation.	Sub-class II Exploitation of minerals.	Sub-class III Industry.	Sub-class IV Transport.	Sub-class V Trade.	Sub-class VI Public Force.	Sub-class VII Public Administration.	Sub-class VIII Professions and Liberal Arts.	Sub-class IX Persons living on their income.	Sub-class X Domestic Service.	Sub-class XI Insufficiently described occupations.	Sub-class XII Unproductive.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
INDIA	**561**	**82**	**357**	**295**	**1**	**44**	**7**	**22**	**2**	**3**	**6**	**1**	**31**	**22**	**5**
Provinces	**571**	**69**	**360**	**288**	**1**	**43**	**6**	**21**	**2**	**2**	**6**	**1**	**32**	**23**	**4**
1. Ajmer-Merwara	476	154	370	327	1	67	26	35	7	5	15	1	11	21	8
2. Andaman and Nicobar Islands.	289	227	484	384	..	37	33	23	26	25	6	1	27	140	9
3. Assam	550	113	337	377	2	34	6	13	1	1	5	..	4	4	3
4. Baluchistan (*Districts and Administered Territories*).	605	30	365	224	1	33	32	20	52	5	7	1	14	2	4
5. Bengal	712	13	275	197	1	25	6	19	1	1	6	..	16	12	4
6. Bihar and Orissa	587	13	400	320	3	27	3	15	1	1	4	..	5	32	2
7. Bombay (*including Aden*) ..	611	52	337	256	..	46	9	21	3	6	7	1	8	23	9
Aden	*507*	*27*	*466*	*21*	*1*	*75*	*118*	*69*	*24*	*5*	*10*	*2*	*68*	*93*	*7*
8. Burma	576	69	355	295	3	45	15	38	2	3	14	..	3	4	2
9. Central Provinces and Berar	467	96	437	429	2	42	6	22	3	3	5	..	6	11	4
10. Coorg	316	166	518	372	..	24	10	18	1	2	6	..	170	80	1
11. Delhi	578	43	379	105	1	116	34	56	12	11	12	3	38	29	5
12. Madras	446	171	383	269	..	49	6	22	1	3	7	1	137	56	3
13. North-West Frontier Province (*Districts and Administered Territories*).	646	40	314	218	..	45	8	25	16	4	9	1	5	18	5
14. Punjab	647	59	294	214	..	66	8	22	4	3	8	1	10	9	8
15. United Provinces of Agra and Oudh.	514	68	418	369	..	54	4	23	2	2	6	..	10	12	4
States and Agencies ..	**525**	**125**	**350**	**317**	**1**	**47**	**8**	**27**	**4**	**5**	**8**	**1**	**30**	**21**	**6**
16. Assam States	514	169	317	390	1	50	5	17	2	2	6	..	4	8	1
17. Baluchistan States ..	664	20	316	275	..	25	8	11	4	3	3	1	3	..	3
18. Baroda State	504	103	393	350	1	53	7	28	6	5	12	2	3	27	2
19. Bengal States	709	23	268	238	..	13	5	13	1	1	4	..	6	4	6
20. Bihar and Orissa States ..	555	48	397	353	3	42	4	17	2	1	3	..	6	11	3
21. Bombay States	595	105	300	313	..	31	2	14	1	5	4	1	6	23	5
22. Central India Agency ..	490	44	466	387	1	43	4	20	5	6	5	1	8	23	7
23. Central Provinces States ..	499	188	313	438	..	32	4	11	2	1	2	..	5	3	3
24. Gwalior State	507	57	436	358	1	46	2	21	5	5	6	..	8	34	7
25. Hyderabad State	529	137	334	268	2	50	21	55	4	6	9	1	33	12	10
26. Jammu and Kashmir State	472	306	222	224	..	23	3	8	2	4	4	1	157	98	4
27. Madras States Agency ..	509	175	316	199	1	71	8	31	1	4	11	1	139	24	1
Cochin State	*491*	*122*	*387*	*213*	..	*89*	*12*	*35*	*1*	*4*	*14*	*2*	*117*	*21*	*1*
Travancore State ..	*528*	*182*	*290*	*185*	*1*	*69*	*7*	*31*	*1*	*3*	*11*	..	*140*	*23*	*1*
Other Madras States ..	*358*	*230*	*412*	*322*	*2*	*41*	*5*	*28*	*1*	*5*	*8*	*1*	*184*	*42*	*3*
28. Mysore State	545	97	358	347	2	36	4	20	3	5	5	1	7	22	3
29. North-West Frontier Province (*Agencies and Tribal Areas*).	107	1	892	50	..	44	24	23	707	21	2	..	2	19	1
30. Punjab States	390	306	304	541	..	33	3	12	2	2	4	1	5	3	4
31. Punjab States Agency ..	575	100	325	311	..	47	6	20	5	4	7	1	7	9	8
32. Rajputana Agency ..	472	153	375	379	1	61	5	26	5	6	14	..	8	16	7
33. Sikkim State	333	17	650	636	..	4	5	8	..	1	1	..	11	1	..
34. United Provinces States ..	494	116	390	421	..	34	2	19	2	3	5	..	8	9	3
35. Western India States Agency	612	125	263	231	2	52	10	29	4	8	10	1	6	28	7

SUBSIDIARY TABLE II(b).

Earners (subsidiary occupation).

Province, State or Agency.	Number per mille of total population of earners having a subsidiary occupation in											
	Sub-class I.	Sub-class II.	Sub-class III.	Sub-class IV.	Sub-class V.	Sub-class VI.	Sub-class VII.	Sub-class VIII.	Sub-class IX.	Sub-class X.	Sub-class XI.	Sub-class XII.
1	2	3	4	5	6	7	8	9	10	11	12	13
INDIA	**21**	..	**6**	**1**	**4**	..	..	**1**	..	**5**	**2**	..
Provinces	**20**	..	**6**	**1**	**4**	..	..	**1**	..	**5**	**2**	..
1. Ajmer-Merwara	24	..	6	1	5	..	1	2	1	..	2	1
2. Andaman and Nicobar Islands ..	4	..	9	1	2	1	..	..	..	..	1	..
3. Assam	39	..	7	3	6	..	..	2	..	..	1	..
4. Baluchistan (*Districts and Administered Territories*).	76	..	3	4	16	..	1	1	2	..	..	1
5. Bengal	14	..	2	1	3	..	..	1	..	1	1	..
6. Bihar and Orissa	18	1	9	1	5	..	..	2	..	1	4	..
7. Bombay (*including Aden*)	13	..	2	1	1	..	1	..	..	..	1	..
Aden	*4*	..	*1*	..	*1*	..	..	..	..	..	..	..
8. Burma	13	..	8	4	4	..	1	1	..	..	..	..
9. Central Provinces and Berar	20	..	6	1	5	..	..	1	..	..	1	..
10. Coorg	11	..	7	5	5	..	2	2	..	49	..	..
11. Delhi	9	..	2	1	1	1	1	..	1	..	1	..
12. Madras	13	..	5	2	4	..	1	1	..	27	3	..
13. North-West Frontier Province (*Districts and Administered Territories*).	12	..	2	1	1	2	1	1	1	1	1	..
14. Punjab	16	..	4	1	2	..	1	1	1	..	..	..
15. United Provinces of Agra and Oudh ..	37	..	11	1	5	..	..	1	..	1	3	1
States and Agencies	**27**	..	**7**	**1**	**5**	..	**1**	**1**	..	**4**	**2**	**1**
16. Assam States	42	..	8	3	8	..	..	1	..	..	5	..
17. Baluchistan States	50	..	2	5	2	..	..	1	..	..	..	..
18. Baroda State	13	..	4	1	3	1	1	1	..	..	3	..
19. Bengal States	13	..	1	..	2	1	..	1	..	..	..	..
20. Bihar and Orissa States	30	1	11	1	6	1	1	2	..	..	3	..
21. Bombay States	13	..	4	1	2	..	1	1	1	1	2	..
22. Central India Agency	23	..	7	1	5	..	1	1	..	1	2	1
23. Central Provinces States	11	..	5	1	2	..	..	1	..	..	..	..
24. Gwalior State	30	..	7	1	5	1	..	1	..	1	6	1
25. Hyderabad State	37	..	8	3	9	..	1	1	..	4	2	1
26. Jammu and Kashmir State	46	..	5	1	2	1	1	1	..	1	1	..
27. Madras States Agency	46	..	7	1	5	..	..	2	..	30	3	..
Cochin State	*29*	..	*9*	*2*	*7*	..	..	*2*	*1*	*30*	*2*	..
Travancore State	*52*	..	*7*	*1*	*4*	..	..	*1*	..	*29*	*2*	..
Other Madras States	*30*	..	*9*	*6*	*7*	..	*2*	*3*	..	*38*	*7*	..
28. Mysore State	13	..	9	2	5	1	3	2	..	..	2	..
29. North-West Frontier Province (*Agencies and Tribal Areas*).	24	..	7	..	15	22	3	..	..	4	7	..
30. Punjab States	14	..	10	1	3	1	3	3	1	1	1	..
31. Punjab States Agency	26	..	6	1	2	..	1	1	1	1	..	..
32. Rajputana Agency	24	..	6	1	4	..	1	1	..	..	1	1
33. Sikkim State	25	..	3	2	1	..	1	2	..	6	..	..
34. United Provinces States	19	..	7	..	3	..	..	2	..	1	2	..
35. Western India States Agency	4	..	1	..	1	..	..	..	..	..	1	..

SUBSIDIARY TABLE III.
Occupations of Females.

Group No.	Occupation.	Number of actual workers (Earners *plus* Working Dependants). Males.	Females.	Number of females per 1,000 males.
1	2	3	4	5
	All Occupations	**105,086,333**	**48,829,717**	**465**
	A. PRODUCTION OF RAW MATERIALS	*74,700,585*	*28,939,854*	*387*
	I.—EXPLOITATION OF ANIMALS AND VEGETATION.	**74,441,002**	**28,853,437**	**388**
	1. Pasture and agriculture	**73,763,185**	**28,690,962**	**389**
	(a) Cultivation	**69,619,876**	**27,353,496**	**393**
1	Non-cultivating proprietors taking rent in money or kind.	2,419,817	837,574	346
2	Estate agents and managers of owners ..	56,151	7,689	137
3	Estate agents and managers of government	8,070	1,868	231
5	Cultivating owners	22,469,143	4,536,957	202
6	Tenant cultivators	26,896,149	7,277,755	271
7	Agricultural labourers	17,110,466	14,369,753	840
8	Cultivators of jhum, taungya and shifting areas.	510,996	317,503	621
	(b) Cultivation of special crops, fruit, etc. (Planters, managers, clerks and labourers).	**1,003,931**	**654,287**	**652**
9	Cinchona	1,222	957	783
10	Coconut	98,933	40,496	409
11	Coffee	34,228	17,815	520
15	Tea	555,451	464,881	837
16	Market gardners, flower and fruit growers ..	233,564	114,155	489
	(c) Forestry	**213,043**	**97,449**	**457**
18	Wood cutters and charcoal burners ..	132,621	40,532	306
20	Collectors of lac	1,564	1,027	657
	(d) Stock raising	**2,915,259**	**579,642**	**199**
21	Cattle and buffalo breeders and keepers ..	822,079	152,730	186
23	Herdsmen, shepherds and breeders of other animals.	2,056,669	425,813	207
	(e) Raising of small animals and insects ..	**11,076**	**6,088**	**550**
24	Birds, bees, etc.	4,546	1,446	318
25	Silk worms	2,869	2,793	974
26	Lac cultivation	3,661	1,849	505
	2. Fishing and hunting	**677,817**	**162,475**	**240**
27	Fishing and pearling	638,941	151,809	238
28	Hunting	38,876	10,666	274
	II.—EXPLOITATION OF MINERALS ..	**259,583**	**86,417**	**333**
	3. Metallic minerals	**37,728**	**10,651**	**282**
30	Iron	4,932	4,092	830
32	Manganese	7,695	4,838	629
	4. Non-metallic minerals	**221,855**	**75,766**	**342**
35	Coal	124,874	49,957	400
37	Building materials (including stone, materials for cement manufacture and clays).	35,350	10,262	290
38	Mica	4,923	2,946	598
39	Precious and semi-precious stones ..	5,260	1,316	250
40	Salt, saltpetre and other saline substances ..	22,257	10.488	471

SUBSIDIARY TABLE III—*contd.*

Occupations of Females—*contd.*

Group No.	Occupation.	Number of actual workers (Earners *plus* Working Dependants). Males.	Females.	Number of females per 1,000 males.
1	2	3	4	5
	B. PREPARATION AND SUPPLY OF MATERIAL SUBSTANCES.	*18,682,341*	*6,924,615*	*371*
	III.—INDUSTRY	**10,797,527**	**4,554,426**	**422**
	5. Textiles	**2,531,411**	**1,570,725**	**620**
42	Cotton ginning, cleaning and pressing ..	195,966	61,239	312
43	Cotton spinning, sizing and weaving ..	1,761,267	1,122,306	637
44	Jute pressing, spinning and weaving ..	235,804	36,649	155
45	Rope, twine, string and other fibres ..	121,996	207,838	1,704
46	Wool carding, spinning and weaving ..	63,934	45,413	710
47	Silk spinning and weaving	57,023	57,498	1,008
48	Hair (horse-hair), etc.	747	773	1,035
49	Dyeing, bleaching, printing, preparation and sponging of textiles.	77,781	25,989	334
50	Lace, crêpe, embroideries, fringes, etc., and insufficiently described textile industries.	16,893	13,020	771
	6. Hides, skins and hard material from the animal kingdom.	**265,904**	**46,170**	**174**
51	Working in leather	256,515	44,429	173
52	Furriers and persons occupied with feathers, and bristles, brush makers.	1,072	239	223
53	Bone, ivory, horn, shell, etc., workers (except buttons).	8,317	1,502	181
	7. Wood	**1,289,419**	**342,304**	**265**
54	Sawyers	86,080	2,503	29
55	Carpenters, turners and joiners	881,586	23,379	27
56	Basket makers and other industries of woody materials including leaves, and thatchers and builders working with bamboo, reeds or similar materials.	321,753	316,422	983
	8. Metals	**659,635**	**53,435**	**81**
57	Smelting, forging and rolling of iron and other metals.	28,715	3,782	132
	9. Ceramics	**727,559**	**297,271**	**409**
63	Potters and makers of earthenware ..	600,628	268,595	447
65	Other workers in ceramics	27,261	8,822	324
	10. Chemical products properly so called and analogous.	400,785	202,519	505
66	Manufacture of matches fireworks and other explosives.	13,185	4,166	316
68	Manufacture and refining of vegetable oil ..	355,488	192,541	542
70	Others	13,561	4,043	298
	11. Food industries	**706,281**	**770,714**	**1,091**
71	Rice pounders and huskers and flour grinders	102,676	453,788	4,420
72	Grain parchers, etc.	104,730	175,291	1,674
74	Makers of sugar molasses and gur ..	19,437	21,612	1,112
75	Sweetmeat and condiment makers ..	87,427	26,552	304
77	Brewers and distillers	4,220	1,733	411
78	Manufacturers of tobacco	78,694	57,718	733
79	Manufacturers of opium	191	49	257
80	Manufacturers of ganja	246	64	260

SUBSIDIARY TABLE III—*contd.*

Occupations of Females—*contd.*

Group No.	Occupation.	Number of actual workers (Earners *plus* Working Dependants). Males.	Females.	Number of females per 1,000 males.
1	2	3	4	5
	B. PREPARATION AND SUPPLY OF MATERIAL SUBSTANCES—contd.			
	III.—INDUSTRY—*concld.*			
	12. Industries of dress and the toilet ..	**2,565,594**	**815,230**	**318**
83	Tailors, milliners, dress makers and darners..	493,116	155,248	315
84	Embroiderers, hat makers and makers of other articles of wear.	15,884	9,589	604
85	Washing and cleaning	637,859	456,469	716
87	Other industries connected with the toilet ..	15,410	9,841	639
	13. Furniture industries	**16,980**	**4,029**	**237**
88	Cabinet-makers, carriage painters, etc. ..	14,394	2,438	169
89	Upholsterers, tent makers, etc.	2,586	1,591	615
90	**14. Building industries**	**528,344**	**90,183**	**171**
	15. Construction of means of transport ..	**28,599**	**566**	**20**
92	Carriage, cart, palki makers and wheelwrights.	7,115	209	29
94	**16. Production and transmission of physical force.**	**21,403**	**2,247**	**105**
	17. Miscellaneous and undefined industries	**1,055,613**	**359,033**	**340**
99	Other miscellaneous and undefined industries (toy making, taxidermy, etc.).	34,852	13,198	379
100	Scavenging	387,695	314,326	811
	IV.—Transport	**2,099,198**	**242,208**	**115**
101	**18. Transport by air**	**295**	**11**	**37**
	19. Transport by water	**348,695**	**13,279**	**38**
104	Labourers employed on harbours, docks, rivers and canals.	46,775	8,575	183
	20. Transport by Road	**1,083,080**	**176,347**	**163**
106	Labourers employed on roads and bridges ..	285,633	138,339	484
	21. Transport by rail	**584,376**	**51,755**	**89**
113	Labourers employed on railway construction and maintenance and coolies and porters employed on railway premises.	238,947	46,878	196
114	**22. Post Office, telegraph and telephone services.**	**82,752**	**816**	**10**
	V.—TRADE	**5,785,616**	**2,127,981**	**368**
115.	**23. Banks establishments of credit exchange and insurance.**	**292,739**	**36,743**	**126**
116	**24. Brokerage, commission and export** ..	**62,444**	**1,504**	**24**
117	**25. Trade in textiles**	**411,315**	**47,587**	**116**
118	**26. Trade in skins, leather and furs** ..	**81,204**	**7,594**	**94**
	27. Trade in wood	**94,058**	**45,196**	**481**
121	Trade in bamboos and canes	20,296	11,689	576
122	Trade in thatches and other forest produce	7,120	9,746	1,369
123	**28. Trade in metals**	**24,103**	**3,101**	**129**
124	**29. Trade in pottery bricks and tiles** ..	**26,112**	**20,376**	**780**
125	**30. Trade in chemical products**	**46,517**	**16,147**	**347**
	31. Hotels, cafes, restaurants, etc.	**335,638**	**154,179**	**459**
126	Vendors of wine, liquors, ærated waters and ice.	166,261	89,234	537
128	Hawkers of drink and food stuffs	42,943	39,596	922

SUBSIDIARY TABLE III—*concld.*

Occupations of Females—*concld.*

Group No.	Occupation.	Number of actual workers (Earners *plus* Working Dependants). Males.	Females.	Number of females per 1,000 males.
1	2	3	4	5
	B. PREPARATION AND SUPPLY OF MATERIAL SUBSTANCES—concld.			
	V.—TRADE—*concld.*			
	32. Other trade in food stuffs	**2,515,266**	**1,321,654**	**525**
130	Dealers in sweetmeats, sugar and spices ..	245,701	112,414	458
131	Dealers in dairy products, eggs and poultry	229,908	243,587	1,059
133	Dealers in fooder for animals	56,162	85,771	1,527
134	Dealers in other food stuffs	1,184,910	633,192	534
138	**33. Trade in clothing and toilet articles** ..	**98,517**	**13,611**	**138**
	34. Trade in furniture	**47,486**	**13,588**	**286**
139	Trade in furniture, carpets, curtains and bedding.	12,270	3,826	312
141	**35. Trade in building materials**	**16,639**	**5,764**	**346**
	36. Trade in means of transport	**105,437**	**5,083**	**48**
145	**37. Trade in fuel**	**129,476**	**163,080**	**1,260**
	38. Trade in articles of luxury and those pertaining to letters and the arts and sciences.	**164,743**	**55,854**	**339**
147	Dealers in common bangles, bead necklaces, fans, small articles, toys, hunting and fishingtackle, flowers, etc.	83,539	50,644	606
	39. Trade of other sorts	**1,333,922**	**216,920**	**163**
149	Dealers in rags, stable refuse, etc. ..	18,974	4,487	236
	C. PUBLIC ADMINISTRATION AND LIBERAL ARTS.	*3,783,454*	*363,445*	*96*
	VI.—PUBLIC FORCE	**834,453**	**7,021**	**8**
	40. Army	**314,810**	**1,728**	**5**
155	**41. Navy**	**1,390**	**8**	**6**
156	**42. Air force**	**1,838**	**25**	**14**
	43. Police	**516,415**	**5,260**	**10**
	VII.—(44)—PUBLIC ADMINISTRATION ..	**962,741**	**32,543**	**34**
	VIII.—PROFESSIONS AND LIBERAL ARTS.	**1,986,260**	**323,881**	**163**
	45. Religion	**907,163**	**119,731**	**132**
	46. Law	**132,591**	**498**	**4**
	47. Medicine	**222,536**	**96,045**	**432**
172	Midwives, vaccinators, compounders, nurses, masseurs, etc.	35,555	85,909	2,416
	48. Instruction	**443,239**	**58,413**	**132**
	49. Letters, arts and sciences (other than 44)	**280,731**	**49,194**	**175**
182	Musicians (composers and performers other than military) actors, dancers, etc.	179,183	38,740	216
	D. MISCELLANEOUS	*7,917,432*	*12,601,208*	*1,592*
185	**IX.—(50).—PERSONS LIVING PRINCIPALLY ON THEIR INCOME.**	**168,829**	**47,045**	**279**
	X.—(51).—DOMESTIC SERVICE	**2,094,487**	**8,803,790**	**4,203**
187	Other domestic service	2,031,302	8,798,706	4,332
	XI.—(52).—INSUFFICIENTLY DESCRIBED OCCUPATIONS.	**4,599,238**	**3,179,404**	**691**
191	Labourers and workmen otherwise unspecified.	3,752,546	3,122,718	832
	XII.—UNPRODUCTIVE	**1,054,878**	**570,969**	**541**
192	**53. Inmates of jails, asylums and alms houses.**	**167,493**	**8,635**	**52**
	54. Beggars, vagrants, prostitutes ..	**864,440**	**486,539**	**563**
194	Procurers and prostitutes	5,811	63,229	10,881
195	**55. Other unclassified non-productive industries.**	**22,945**	**75,795**	**3,303**
	Earners whose occupations are not returned	**2,521**	**595**	**236**

SUBSIDIARY TABLE IV.

Selected Occupations.

Occupation.	Actual Workers. 1931.	1921.	1911.	Percentage of Variation 1921-31.
Total Workers	***153,916,050**	**146,413,562**	**148,885,003**	**+5·1**
A. PRODUCTION OF RAW MATERIALS. ..	*103,640,439*	*106,035,722*	*106,508,881*	*—2·3*
I.—EXPLOITATION OF ANIMALS AND VEGETATION	**103,294,439**	**105,688,373**	**106,200,432**	**—2·3**
1. Pasture and Agriculture	102,454,147	104,943,712	105,335,379	—2·4
2. Fishing and hunting	840,292	744,661	865,053	+12·8
II.—EXPLOITATION OF MINERALS ..	**346,000**	**347,349**	**308,449**	**—0·4**
3. Metallic minerals	48,379	47,895	50,281	+1·0
4. Non-metallic minerals	297,621	299,454	258,168	—0·6
B.—PREPARATION AND SUPPLY OF MATERIAL SUBSTANCES.	*25,606,956*	*25,734,692*	*28,002,567*	*—0·5*
III.—INDUSTRY	**15,351,953**	**15,714,907**	**17,506,279**	**—2·3**
5. Textiles	4,102,136	4,030,674	4,449,449	+1·8
6. Hides, skins and hard materials from the animal kingdom.	312,074	310,113	294,794	+0·6
7. Wood	1,631,723	1,581,006	1,730,920	+3·2
8. Metals	713,070	725,227	737,307	1·7
9. Ceramics	1,024,830	1,085,335	1,159,168	—5·6
10. Chemical products properly so called and analogous.	603,304	577,204	630,079	+4·5
11. Food Industries	1,476,995	1,653,464	2,134,045	—10·7
12. Industries of dress and the toilet ..	3,380,824	3,403,842	3,747,755	—0·7
13. Furniture Industries	21,009	12,066	18,163	+74·1
14. Building Industries	618,527	811,945	962,115	—23·8
15. Construction of means of transport ..	29,165	22,894	24,938	+27·4
16. Production and transmission of physical force.	23,650	11,514	7,257	+105·4
17. Miscellaneous and undefined industries	1,414,646	1,489,623	1,610,289	—5·0
IV.—TRANSPORT	**2,341,406**	**1,970,400**	**2,394,882**	**+18·8**
18. Transport by air	306	335	..	—8·7
19. Transport by water	361,974	349,721	481,605	+3·5
20. Transport by road	1,259,427	1,010,734	1,362,504	+24·6
21. Transport by rail	636,131	532,136	474,184	+19·5
22. Post office, telegraph and telephone services.	83,568	77,474	76,589	+7·9
V.—TRADE	**7,913,597**	**8,049,385**	**8,101,406**	**—1·7**
23. Banks, establishments of credit, exchange and insurance.	329,482	345,135	421,464	—4·5
24. Brokerage, commission and export ..	63,948	90,812	89,149	—29·6
25. Trade in textiles	458,902	493,393	513,030	—7·0
26. Trade in skins, leather and furs ..	88,798	88,302	114,557	+0·6
27. Trade in wood	139,254	105,220	109,398	+32·3
28. Trade in metals	27,204	24,925	22,523	+9·1
29. Trade in pottery, bricks and tiles ..	46,488	33,571	54,159	+38·5
30. Trade in chemical products ..	62,664	50,244	76,500	+24·7
31. Hotels, cafes, restaurants, etc. ..	489,817	349,044	351,889	+40·3

*Includes 3,116 earners whose occupations were not returned.

SUBSIDIARY TABLE IV—*concld.*

Selected Occupations—*concld.*

Occupation.	Actual Workers. 1931.	1921.	1911.	Percentage of Variation 1921-31.
B. PREPARATION AND SUPPLY OF MATERIAL SUBSTANCES—concld.				
V.—TRADE—*concld.*				
32. Other trade in food stuffs ..	3,836,920	4,257,723	4,477,113	—9·9
33. Trade in clothing and toilet articles ..	112,128	116,764	122,863	—4·0
34. Trade in furniture	61,074	72,366	72,448	—15·6
35. Trade in building materials ..	22,403	38,668	39,741	—42·1
36. Trade in means of transport ..	110,520	134,618	97,810	—17·9
37. Trade in fuel	292,556	308,157	335,000	—5·1
38. Trade in articles of luxury and those pertaining to letters arts and sciences.	220,597	198,631	234,716	+11·1
39. Trade of other sorts	1,550,842	1,341,812	969,046	+15·6
C. PUBLIC ADMINISTRATION AND LIBERAL ARTS.	*4,146,899*	*4,125,676*	*4,302,535*	*+0·5*
VI.—PUBLIC FORCE	**841,4[illegible]**	**1,039,538**	**1,069,424**	**—19·1**
40. Army	316,538	440,351	384,074	—28·1
41. Navy	1,398	250	2,229	+459·2
42. Air force	1,863	856	..	+117·6
43. Police	521,675	598,081	683,121	—12·8
VII.—PUBLIC ADMINISTRATION	**995,284**	**1,005,346**	**970,521**	**—1·0**
44. Public Administration	995,284	1,005,346	970,521	—1·0
VIII.—PROFESSIONS AND LIBERAL ARTS	**2,310,141**	**2,080,792**	**2,262,590**	**+11·0**
45. Religion	1,026,894	1,041,459	1,195,129	—1·4
46. Law	133,089	98,067	82,461	+35·7
47. Medicine	318,581	255,526	270,302	+24·7
48. Instruction	501,652	336,543	271,668	+49·1
49. Letters, arts and sciences (other than 44).	329,925	349,197	443,030	—5·5
D. MISCELLANEOUS ..	*20,518,640*	*10,517,472*	*10,071,020*	*+95·1*
IX.—PERSONS LIVING ON THEIR INCOME	**215,874**	**184,259**	**206,070**	**+17·2**
50. Persons living principally on their income.	215,874	184,259	206,070	+17·2
X.—DOMESTIC SERVICE ..	**10,898,277**	**2,531,866**	**2,725,856**	**+330·4**
51. Domestic service	10,898,277	2,531,866	2,725,856	+330·4
XI.—INSUFFICIENTLY DESCRIBED OCCUPATIONS.	**7,778,642**	**5,946,713**	**5,067,700**	**+30·8**
52. General terms which do not indicate a definite occupation.	7,778,642	5,946,713	5,067,700	+30·8
XII.—UNPRODUCTIVE	**1,625,847**	**1,854,634**	**2,071,394**	**—12·3**
53. Inmates of jails, asylums and alms houses.	176,128	128,393	124,563	—37·2
54. Beggars, vagrants, prostitutes ..	1,350,979	1,686,737	1,946,831	—19·9
55. Other unclassified non-productive industries.	98,740	39,504	..	+149·9

SUBSIDIARY TABLE V.

Occupations in selected cities.

Cities.	Number per 10,000 of actual workers by each class and sub-class of occupation.																Number per cent. of			
	A. Production of raw materials.	I—Exploitation of animals and vegetation.	II—Exploitation of minerals.	B. Preparation and supply of material substances.	III—Industry.	IV—Transport.	V.—Trade.	C. Public administration and liberal arts.	VI—Public force.	VII—Public administration.	VIII—Professions and liberal arts.	D. Miscellaneous.	IX—Persons living on their income.	X—Domestic service.	XI—Insufficiently described occupations.	XII—Unproductive.	All occupations.	Actual workers.	Non-working dependants.	Number of female workers per 100 males.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
Amritsar	831	830	1	6,299	3,120	554	2,625	796	157	193	446	2,074	49	791	1,020	214	10,000	37	63	3
Bombay*	211	192	19	5,547	3,116	896	1,535	1,083	160	570	353	3,104	33	712	2,227	132	10,000	49	51	11
Calcutta (including Howrah) ..	267	262	5	4,430	1,932	911	1,587	873	106	302	465	4,430	178	1,518	2,502	232	10,000	49	51	8
Cawnpore	569	569	..	5,893	3,395	511	1,987	829	324	161	344	2,709	195	988	1,394	132	10,000	43	57	10
Delhi (excluding New Delhi and Cantonment).	489	464	25	6,635	3,498	1,122	2,015	790	197	206	387	2,086	101	1,157	733	95	10,000	40	60	7
Hyderabad (Deccan).. ..	1,089	1,081	8	3,506	977	1,125	1,404	2,260	704	871	685	3,145	404	1,453	844	444	10,000	62	38	39
Karachi	507	471	36	4,820	1,887	1,217	1,716	1,764	659	418	687	2,909	86	400	2,084	339	10,000	32	68	12
Lahore	966	961	5	5,542	2,266	1,723	1,553	1,754	465	798	491	1,738	110	758	566	304	10,000	42	58	4
Madras	421	419	2	3,428	1,649	690	1,089	787	115	257	415	5,364	170	3,434	1,606	154	10,000	50	50	61
Poona	875	875	..	3,710	2,115	434	1,161	2,457	981	871	605	2,958	232	808	1,211	707	10,000	31	69	20
Rangoon	193	190	3	7,417	3,117	1,914	2,386	1,173	128	441	604	1,217	73	708	304	132	10,000	56	44	10

*The discrepancy between the sum of the figures in columns 2—17 and the figure in column 18 is due to the exclusion from the former columns 3,116 persons (*i. e.* 55 : 10,000) occupation details for whom are not available.

SUBSIDIARY TABLE VI.

(i) Number of persons employed on the 26th February 1931 in the Railway Department.

Province, State or Agency.	Persons Directly Employed.										Persons Indirectly Employed.								Grand Total.	
	Officers.		Subordinates drawing more than Rs. 75 per mensem.		Subordinates drawing from rs. 20 to 75 per mensem.		Subordinates drawing under Rs. 20 per mensem.		Total.		Contractors.		Contractors' regular employees.		Coolies.		Total.			
	Europeans and Anglo-Indians.	Indians.	Europeans and Anglo-Indians.	Indians.	Europeans and Anglo-Indians.	Indians.	Europeans and Anglo-Indians.	Indians.	Europeans and Anglo-Indians.	Indians.	Europeans and Anglo-Indians.	Indians.	Europeans and Anglo-Indians.	Indians.	Europeans and Anglo-Indians.	Indians.	Europeans and Anglo-Indians.	Indians.	Europeans and Anglo-Indians.	Indians.
Total (a)	426	207	2,378	11,338	1,615	74,941	129	109,002	4,548	195,488	1	662	..	2,271	..	27,996	1	30,929	4,549	226,417
Ajmer-Merwara	31	8	412	1,435	98	7,963	1	4,045	542	13,451	..	18	..	107	..	533	..	658	542	14,109
Assam	33	6	58	404	38	3,132	3	9,229	132	12,771	..	149	..	281	..	7,713	..	8,143	132	20,914
Bombay	292	122	1,518	7,930	1,246	53,817	64	71,725	3,120	133,594	1	151	..	1,007	..	10,046	1	11,204	3,121	144,798
Burma	15	18	1	139	5	90	1	1,685	22	1,932	..	207	..	35	..	4,798	..	5,040	22	6,972
N.-W. F. Province	1	2	19	138	..	2,399	..	1,288	20	3,827	..	9	..	54	..	220	..	283	20	4,110
Cochin State	..	1	4	36	..	202	..	407	4	646	..	3	..	..	..	..	..	3	4	649
Mysore State	12	21	104	169	207	1,763	60	4,412	383	6,365	..	48	..	313	..	772	..	1,133	383	7,498
Rajputana Agency	42	29	262	1,087	21	5,575	..	16,211	325	22,902	..	77	..	474	..	3,914	..	4,465	325	27,467

	Officers.		Subordinates on scales of pay rising to Rs. 250 per mensem or over.		Subordinates on scales of pay Rising from Rs. 30 to Rs. 249 per mensem.		Subordinates on scales under Rs. 30 per mensem.		Total.			
Total (b)	997	569	4,220	2,233	7,732	167,182	503	388,637	13,452	558,571		
Bengal	355	199	1,354	802	2,281	58,549	60	94,310	4,050	153,850	Not available.	
Bihar and Orissa	106	36	650	166	782	15,355	10	59,777	1,548	75,334	Not available	13,452 558,571
Central Provinces	49	17	322	113	499	7,417	5	33,453	875	41,000	Not available	4,050 153,860
Delhi	11	10	20	30	15	851	3	1,191	49	2,082	Not available	1,548 75,334
Madras	164	89	426	193	2,307	22,967	348	51,834	3,245	75,083	Not available	875 41,000
Punjab	178	154	683	655	708	37,362	52	66,275	1,621	104,446	Not available	49 2,082
United Provinces	121	47	687	209	1,053	20,922	22	66,393	1,883	87,571	Not available	3,245 75,083
Baroda State	1	12	7	19	7	1,775	1	4,817	16	6,623	Not available	1,621 104,446
Central India	12	5	70	44	76	1,812	2	10,263	160	12,124	Not available	1,883 87,571
Jammu and Kashmir	..	..	..	..	..	..	..	80	..	100	Nor available	16 6,623
Travancore State	..	..	1	2	4	20,102	..	244	5	348	Not available	160 12,124
											Not available	.. 100
											Not available	5 348

NOTE.—The Railways in the majority of the Provinces and States were not able to supply conveniently the information for this table in the form prescribed, and therefore figures according to the form followed by them were accepted and are reproduced under the head (b) above.

SUBSIDIARY TABLE VI—*contd.*

(ii) Number of persons employed on the 26th February 1931 in the Irrigation Department.

Province, State or Agency.	Total persons employed.		Persons directly employed.														Persons indirectly employed.							
			Total.		Officers.		Upper Subordinates.		Lower Subordinates.		Clerks.		Peons and other servants.		Coolies.		Total.		Contractors.		Contractors' regular employees.		Coolies.	
	Europeans and Anglo-Indians.	Indians.	Europeans and Anglo-Indians.	Indians.	Europeans and Anglo-Indians.	Indians.	Europeans and Anglo-Indians.	Indians.	Europeans and Anglo-Indians.	Indians.	Europeans and Anglo-Indians.	Indians.	Europeans and Anglo-Indians.	Indians.	Europeans and Anglo-Indians.	Indians.	Europeans and Anglo-Indians.	Indians.	Europeans and Anglo-Indians.	Indians.	Europeans and Anglo-Indians.	Indians.	Europeans and Anglo-Indians.	Indians.
	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Total	**419**	**262,109**	**366**	**89,460**	**263**	**841**	**25**	**1,428**	**8**	**2,528**	**21**	**6,703**	**31**	**34,707**	**18**	**43,253**	**53**	**172,649**	**45**	**7,709**	**8**	**28,166**	..	**136,774**
Bengal	45	4,074	16	2,238	16	37	..	2	..	130	..	346	..	1,707	..	16	29	1,836	29	408	..	561	..	867
Bihar and Orissa ..	4	6,349	4	2,289	3	21	..	75	..	82	1	335	..	1,285	..	491	..	4,060	..	268	..	124	..	3,668
Bombay	83	76,271	79	26,700	48	158	15	166	1	561	1	1,609	2	4,908	12	19,298	4	49,571	1	714	3	21,251	..	27,606
Burma	22	6,972	22	1,932	15	18	1	139	5	90	1	177	..	328	..	1,180	..	5,040	..	207	..	35	..	4,798
Central Provinces* ..	13	16,302	13	7,988	12	29	1	107	..	197	..	239	..	757	..	6,659	..	8,314	..	158	..	262	..	7,894
Delhi	..	379	..	60	..	2	..	..	..	2	..	3	..	19	..	34	..	319	..	9	..	5	..	305
Madras	53	35,137	52	11,945	17	107	4	249	..	239	1	561	24	3,850	6	6,939	1	23,192	..	651	1	331	..	22,210
N.-W. F. Province ..	8	2,783	8	1,655	8	14	..	27	..	14	..	69	..	1,007	..	524	..	1,128	..	82	..	60	..	986
Punjab	108	68,461	107	23,167	86	245	2	548	..	299	16	1,171	3	14,613	..	6,291	1	45,294	1	2,041	..	3,494	..	39,759
United Provinces ..	74	32,170	62	9,035	58	126	1	4	..	414	1	1,606	2	5,472	..	1,413	12	23,135	8	2,049	4	1,470	..	19,616
Baroda State	..	43	..	43	..	..	..	..	..	..	..	11	..	26	..	6	..	..	..	..	..	..	..	..
Central India Agency ..	..	336	..	141	..	2	..	..	..	6	..	11	..	91	..	31	..	195	..	20	..	8	..	167
Cochin State	..	96	..	96	..	..	..	..	..	1	..	1	..	94	..	..	..	..	..	..	..	..	..	..
Gwalior State	..	815	..	460	..	11	..	30	..	46	..	226	..	147	..	..	..	355	..	160	..	..	..	195
Mysore State	9	11,082	3	1,270	..	65	1	65	2	437	..	278	..	224	..	201	6	9,812	6	902	..	539	..	8,371
Travancore State ..	..	839	..	441	..	6	..	16	..	10	..	60	..	179	..	170	..	398	..	40	..	26	..	332

* Includes persons employed in the Government and Quasi Government Irrigation works not under the Public Works Department.

SUBSIDIARY TABLE VI—*contd.*

(iii) Number of persons employed on the 26th February 1931 in the Post Office and Telegraph Department.

Province, State or Agency.	Supervising Officers (including Probationary Superintendents and Inspectors of Post Offices and Assistant and Deputy Superintendent of Telegraphs and all officers of higher rank than these.				Post Masters, including Deputy, Assistant, Sub and Branch Post Masters.				Signalling establishment, including warrant officers, non-commissioned officers, military telegraphists and their employees.				Miscellaneous agents, schoolmasters, stationmasters, etc.				Clerks of all kinds.				Postmen.				Skilled labour establishment including foremen, instrument makers, carpenters, blacksmiths, mechanics, sub-inspectors, linemen and line-riders and other employees.			
	Post Office.		Telegraph Department.		Post Office.		Telegraph Department.		Post Office.		Telegraph Department.		Post Office.		Telegraph Department.		Post Office.		Telegraph Department.		Post Office.		Telegraph Department.		Post Office.		Telegraph Department.	
	Europeans and Anglo-Indians.	Indians.	Europeans and Anglo-Indians.	Indians.	Europeans and Anglo-Indians.	Indians.	Europeans and Anglo-Indians.	Indians.	Europeans and Anglo-Indians.	Indians.	Europeans and Anglo-Indians.	Indians.	Europeans and Anglo-Indians.	Indians.	Europeans and Anglo-Indians.	Indians.	Europeans and Anglo-Indians.	Indians.	Europeans and Anglo-Indians.	Indians.	Europeans and Anglo-Indians.	Indians.	Europeans and Anglo-Indians.	Indians.	Europeans and Anglo-Indians.	Indians.	Europeans and Anglo-Indians.	Indians.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29
Total	68	699	329	201	107	8,141	26	3	..	40	1,860	1,525	15	14,747	2	65	234	18,147	94	2,112	..	32,754	2	..	..	134	69	6,185
Ajmer-Merwara	..	2	3	1	1	20	3	3	..	..	21	21	..	27	..	..	1	62	..	11	..	83	..	..	..	..	..	13
Andamans and Nicobars ..	..	..	1	..	..	..	..	..	..	..	5	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	3
Assam	3	25	5	1	..	509	..	..	..	..	21	30	...	732	..	..	6	654	..	23	..	1,383	..	..	..	..	..	171
Bengal	8	141	58	45	9	1,222	..	..	..	..	219	342	..	..	..	..	21	3,467	26	424	..	5,668	..	..	..	9	14	1,566
Bihar and Orissa	2	42	19	10	1	659	..	..	..	..	26	49	..	1,107	..	..	..	965	..	41	..	2,127	..	..	..	2	4	320
Bombay (*excluding Aden*) ..	10	98	36	41	3	946	..	..	..	..	431	373	..	2,646	..	..	19	3,263	18	518	..	4,799	..	..	..	15	..	871
Burma	6	20	48	13	5	451	23	..	..	..	182	69	3	181	..	..	34	973	12	232	..	1,435	..	..	..	..	1	496
Central Provinces and Berar ..	2	24	20	7	3	278	..	..	..	..	72	29	..	738	..	..	14	594	7	58	..	1,118	..	..	..	..	..	236
Madras	8	84	34	34	36	1,754	..	..	..	..	283	218	5	2,970	..	..	79	2,586	21	250	..	4,941	..	..	..	100	..	580
* North-West Frontier Province ..	..	11	4	4	2	168	..	..	..	..	29	13	..	298	..	..	..	303	..	80	..	481	..	..	..	..	..	178
* Punjab and Delhi	11	91	71	34	13	760	..	..	..	37	234	219	3	2,938	..	..	22	2,100	3	263	..	3,197	..	..	..	5	20	934
United Provinces	12	104	18	3	17	276	..	..	..	..	276	131	1	1,968	..	..	10	2,259	5	144	..	4,631	..	..	..	..	30	551
Baroda State	..	6	1	..	..	65	..	..	..	1	..	..	..	241	..	..	..	123	..	..	..	365	2	..	..	..	..	16
Central India Agency	..	5	9	1	1	124	..	..	..	1	12	11	..	210	2	23	..	70	..	..	..	298	..	..	..	3	..	75
‡ Cochin State	..	1	..	..	1	9	..	..	..	..	..	..	1	37	..	..	..	19	..	..	..	38	..	..	..	..	..	..
† Gwalior State	..	20	..	7	..	174	..	..	..	..	..	9	..	61	..	42	..	117	..	18	..	382	..	..	..	..	..	36
* Jammu and Kashmir State ..	1	4	1	..	..	58	..	..	..	1	4	2	..	87	..	..	..	72	..	1	..	488	..	..	..	..	..	59
Mysore State	3	8	1	..	12	387	..	..	..	..	34	3	..	160	..	..	24	231	2	47	..	614	..	..	..	..	..	..
Rajputana Agency	2	10	..	..	1	240	..	..	..	..	1	5	..	283	..	..	..	233	..	..	..	593	..	..	..	..	..	69
‡ Travancore State	..	3	..	..	2	41	..	..	..	..	10	1	2	63	..	..	4	56	..	2	..	113	..	..	..	..	..	1

* The figures for Telegraph Department also include those for the Engineering Department.

† The figures for Telegraph Department also include those for the Telephone Department.

‡ Excludes persons working in the Anchal Department.

SUBSIDIARY TABLE VI—*concld.*

(iii) Number of persons employed on the 26th February 1931 in the Post Office and Telegraph Department—*concld.*

Province, State or Agency.	Unskilled labour establishment including line coolies, cable guards, battery men, telegraph messengers, peons and other employees.				Road establishment consisting of overseers, runners, clerks and booking agents, boatmen, syces, coachmen, bearers and others.‖				Railway Mail service.												Combined offices.				Total.	
	Post Office.		Telegraph Department.		Post Office.		Telegraph Department.		Supervising officers (including Superintendents and Inspectors of Sorting).		Clerks of all‖ kinds.		Sorters.		Mail Guards, Mail Agents, Van peons, Porters, etc.		Messengers.		Other servants.		Signallers.		Messengers and other servants.			
	Europeans and Anglo-Indians.	Indians.	Europeans and Anglo-Indians.	Indians.	Europeans and Anglo-Indians.	Indians.	Europeans and Anglo-Indians.	Indians.	Europeans and Anglo-Indians.	Indians.	Europeans and Anglo-Indians.	Indians.	Europeans and Anglo-Indians.	Indians.	Europeans and Anglo-Indians.	Indians.	Europeans and Anglo-Indians.	Indians.	Europeans and Anglo-Indians.	Indians.	Europeans and Anglo-Indians.	Indians.	Europeans and Anglo-Indians.	Indians.	Europeans and Anglo-Indians.	Indians.
	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55
Total	2	9,041	..	3,572	..	18,674	..	21	5	110	..	198	4	4,905	..	3,392	..	16	..	1	15	3,038	..	3,756	2,832	131,477
Ajmer-Merwara	..	33	..	16	..	23	..	..	..	3	..	18	..	70	..	46	..	..	..	1	..	3	..	9	29	465
Andamans and Nicobars ..	..	..	..	8	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	6	11
Assam	..	306	..	80	..	1,558	..	..	..	4	..	1	..	85	..	97	..	..	..	..	..	57	..	312	35	6,028
Bengal	2	1,700	..	1,003	..	2,995	..	17	1	12	..	21	..	692	..	463	..	..	..	..	1	383	..	543	359	20,713
Bihar and Orissa	..	737	..	44	..	1,775	..	..	..	14	..	11	..	406	..	263	..	..	..	..	..	174	..	379	52	9,125
Bombay	..	1,845	..	710	..	1,210	..	3	3	20	..	52	..	692	..	543	..	..	..	..	..	186	..	595	520	19,426
Burma	..	564	..	340	..	134	..	..	..	5	..	4	2	139	..	146	..	..	..	..	13	188	..	215	329	5,605
Central Provinces and Berar	..	275	..	67	..	1,087	..	..	..	6	..	4	..	193	..	151	..	..	..	..	..	38	..	166	118	5,069
Madras	..	1,617	..	399	..	2,688	..	..	1	14	..	53	2	773	..	560	..	..	..	..	..	1,106	..	568	469	21,295
*North-West Frontier Province	..	185	..	89	..	168	..	..	..	..	..	4	..	23	..	29	..	..	..	..	..	44	..	72¶	35	2,150
*Punjab and Delhi	..	1,127	..	441	..	1,537	..	..	..	24	..	15	..	832	..	501	..	..	..	..	..	232	..	328	377	15,615
United Provinces	..	..	..	267	..	3,986	..	..	§	§	..	..	..	729	..	394	..	..	..	..	..	490	..	286	369	16,229
Baroda State	..	57	..	..	..	54	..	..	..	3	..	1	..	85	..	43	..	..	..	..	..	7	..	60	3	1,127
Central India Agency ..	..	91	..	27	..	244	..	..	..	3	..	6	..	107	..	72	..	..	..	..	..	95	..	74	24	1,540
‡Cochin State	..	17	..	..	..	27	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	148
†Gwalior State	..	39	..	19	..	39	..	1	..	..	..	1	..	2	..	5	..	..	..	..	..	..	..	..	..	973
*Jammu and Kashmir State	..	47	..	17	..	530	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	2	..	12	6	1,381
Mysore State	..	192	..	24	..	234	..	..	..	..	..	..	..	..	..	..	..	16	..	..	‖	‖	..	..	76	1,916
Rajputana Agency ..	..	173	..	5	..	330	..	..	..	2	..	7	..	76	..	78	..	..	..	..	..	20	..	114	4	2,238
‡Travancore State	..	36	..	16	..	55	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	13	..	23	19	423

§Included among supervising officers under columns 2 and 3. ‖Included against item 3. ¶Includes 38 belonging to the Telegraph Department.

NOTE.—The figures in columns 38—53 refer expressly to Post Office personnel. For *, ‡ an † see footnote on page 318.

SUBSIDIARY TABLE VII.

Statistics of Factories in British India subject to the Indian Factories Act in 1930.

Industry.	Enumerated Factories.	Average daily number of persons employed.
Total ..	**8,148**	**1,528,302**
Textiles	*2,789*	*884,221*
Cotton (spinning, weaving, ginning, bailing and other factories).	2,392	492,284
Dyeing and bleaching ..	38	5,188
Indigo	16	859
Jute mills	212	369,387
Lac	18	1,995
Rope Works	15	3,831
Silk Mills	7	1,712
Woollen Mills	12	4,247
Miscellaneous	79	4,718
Hides, Skins, etc. ..	*58*	*9,758*
Bone and Manure ..	21	3,736
Leather and Shoes ..	11	2,626
Tanneries	21	3,345
Miscellaneous	5	51
Wood	*235*	*19,740*
Carpentry and Cabinet-making. ..	36	3,686
Saw Mills	199	16,054
Metals	199	80,327
Foundries	73	3,250
Iron and steel smelting and steel rolling mills.	5	30,484
Kerosene tinning and packing.	28	10,170
Lead smelting and lead rolling mills.	6	4,489
Mints	2	1,436
Metal Stamping	28	3,198
Ordnance	25	21,664
Steel trunk, lock and cutlery.	3	808
Miscellaneous	29	4,828
Ceramics	*105*	*15,760*
Bricks and tiles	76	9,611
Cement, lime and Potteries	29	6,149
Chemical products, etc. ..	*436*	*52,819*
Chemicals	12	3,653
Ice and aerated waters ..	80	3,160
Matches	41	17,137
Oil Mills	249	11,919
Paints	8	1,409
Petroleum refineries ..	12	12,034
Soaps	9	891
Turpentine and rosin ..	2	229
Miscellaneous	23	2,387
Food Industries ..	*3,044*	*179,731*
Bakeries, biscuit and confectionery.	22	1,398
Breweries and distilleries ..	32	2,140
Coffee	15	4,265
Dairy produce	3	237
Flour Mills	73	5,482
Food canning and bottling	2	22
Forage Presses	10	389
Rice Mills	1,615	78,271
Sugar	48	15,203
Tea	959	60,161
Tobacco	18	6,040
Miscellaneous	247	6,123
Industries of dress and toilet	*44*	*3,912*
Clothing	3	1,470
Hosiery	41	2,442
Building Industries ..	*10*	*693*
Stone dressing	10	693
Construction and means of Transport.	*287*	*166,251*
Coach-building and motor-car repairing.	95	6,462
Railway workshops ..	153	130,700
Ship-building and engineering.	30	26,289
Tramway works	9	2,800
Production and Transmission of physical force.	*464*	*62,925*
Electrical Engineering ..	41	5,140
Electrical generating and transforming stations.	39	5,363
Gas works	18	1,826
General Engineering ..	303	43,542
Telegraphs	2	1,300
Water pumping stations	26	2,520
Miscellaneous	35	3,234
Miscellaneous and undefined Industries.	*477*	*52,165*
Glass	19	2,390
Paper Mills	7	5,597
Paper pulp	2	1361
Printing, bookbinding, etc.	381	37,545
Miscellaneous	68	5,272

NOTE.—The above figures have been extracted from the Government of India's Report for the year 1930 on the factories subject to the Indian Factories Act. Details of the persons employed by age or sex are not available separately for each branch of industry but of the average number employed in all factories (*i.e.*, 1,528,302) 1,235,425 were men, 254,905 women, 39,968 boys and 6,875 girls. Factories engaged in two or more classes of work are shown only under the principal class in this table.

APPENDIX TO CHAPTER VIII.

A Note on the Ages of Male Earners and Dependants.

(By B. L. Cole.)

Statement showing the occupational distribution per mille of Population in certain Provinces and States, etc.

Province, etc.	Earners.		Working Dependants.		Non-Working Dependants.	
	Males.	Females.	Males.	Females.	Males.	Females.
Travancore ..	219	71	32	151	252	275
Madras	273	110	20	152	201	244
Gwalior	343	93	20	37	167	340
Baroda	291	101	18	85	206	299
Ajmer-Merwara ..	313	56	29	125	186	291
Rajputana	308	67	35	118	181	291

At first sight these figures suggest that there existed wide differences of opinion concerning the definitions of the three terms. 'Earner', 'Working Dependant' and 'Non-Working Dependant'. Before definitely ascribing the differences in the ratios to this reason, it is as well to remember that they are influenced not only by economic conditions due to environment and locality, but also by the proportions of the sexes and the age constitution of the population when set down in figures for 1,000 *persons*. For the purpose of this enquiry it will suffice to examine the figures for males only and to start by assuming that all males aged under 10 years and over 60 are non-working dependants. This assumption as regards those aged over 60 is perhaps somewhat arbitrary but it provides a basis for certain deductions as will be seen hereafter.

Starting from the South, we get from Imperial Table VII the age constitution of males among 1,000 *persons* in Travancore and Madras to be as shown in the following statements. Following the assumption referred to above, all males aged under 10 and over 60 provides the majority of non-working dependants supplemented where necessary by the requisite number of those aged 10—15. The remainder of those so aged are then placed in the categories of Working Dependants and Earners to the extent required leaving all those aged 15 to 20 in the category of Earners wherever possible.

Travancore. Density 668.

Earners—

0—10 —153		=230+22	=252	Non-Working Dependants.
10—15 — 62				
15—20 — 47	15			
	32		= 32	Working Dependants.
20—60 —221	219		=219	Earners.
	2			
60 & over. —20		= 22		
503			503	

Now there are in this State 503 males in every 1,000 persons in the population, and it is unlikely that nearly one-third of those aged from 15 to 20 are non-working dependants. In this densely populated and prosperous State it is far more probable that the older males give up leading an active life before they are aged 60 and that the majority of the male working dependants are lads aged from 10—15, that all aged from 15—20 are earners* leaving 49 out of 221 aged from 20—60 to retire from active life and free to join the ranks of the non-working dependants.

The figures for the Madras Presidency present somewhat similar features, but here the male ratio in 1,000 persons is 494, *i.e.*, 9 less than in Travancore.

Madras Density 328.

0—10—136		=178+23=201	Non-Working Dependants.
10—15— 59	42		
	17		
	3	= 20= 20	Working Dependants.
15—20— 43	40		
20—60—233		=273=273	Earners.
60 & over. —23			
494		494	

* This is, I think, most unlikely.—J. H. H.

It is unlikely that as many as 42 out of 59 of those aged 10—15 are non-working dependants. The probability is that all the 20 Working Dependants are furnished by this group and that of the remaining 39 only a few of the younger ones are non-workers and that quite 25 are earners. Pursuing this assumption, we therefore find that the 273 Earners consist of 25 who are aged 10—15, 43 aged 15—20 and 205 aged 20—60. This leaves the 28 older males of this latter age group free to join the non-working category. The constitution would then be something like this :—

0—10	—136		=150+28+23	=201	N. W. D.
10—15	— 59	14			
		20		= 20	W. D.
		25			
15—20	— 43		=273	=273	Earners.
20—60	—233	205			
			28		
60 & over.	—23				
	494			494	

These figures for the South of India lead one to the conclusions that a man's working life is over before the age of 60 is reached owing to a sufficiency of younger men to take up the responsibilities of earners.

For conditions in the central areas of the Continent, the figures for Gwalior and Baroda States may be examined. Bearing in mind that the male ratios in 1,000 persons are 530 and 515 respectively, one is struck by the large figure of 343 earners in Gwalior.

Gwalior. Density 134.

0—10	—141		=151+16	=167	N. W. D.
10—15	— 66	10			
		20		= 20	W. D.
		36			
15—20	— 53		=343	=343	Earners.
20—60	—254				
60 & over.	— 16				
	530			530	

No other distribution appears probable. It is not likely that many more than 36 boys out of the 66 aged from 10—15 are Earners and if there are fewer, it entails putting some of the 16 old men of over 60 into this category.

Baroda. Density 299.

0—10	—141		=184+22	=206	N. W. D.
10—15	— 62	43			
		18		= 18	W. D.
		1			
15—20	— 50		=291	=291	Earners.
20—60	—240				
60 & over.	—22				
	515			515	

The striking feature of this distribution is that only 1 boy out of the 62 aged from 10—15 is an earner and that 43 of them are non-workers. The progressive educational policy of this State is well known and may be a contributing factor. The proportion of 43 represents an actual population of 105,049. Of those aged from 10—15, 62,330 can at least read, so that the remaining 42,719 must be wholly illiterate and are therefore not likely to be sitting idle. The inference therefore, is that, as in the South, men probably cease working before they reach the age of 60.

Let us now examine the figures for another typical tract of country—the sparsely populated Rajputana Agency and the small province of Ajmer-Merwara.

Rajputana. Density 87.

0—10	—147		=162+19	=181	N. W. D.
10—15	— 66	15			
		35		= 35	W. D.
		16			
15—20	— 50		=308	=308	Earners.
20—60	—242				
60 & over.	—19				
	524			524	

The distribution here seems to be reasonably normal and calls for no special comment.

Ajmer-Merwara. Density 207.

0—10	—140		=170+16=186	N. W. D.
10—15	— 61	30		
		29		= 29 W. D.
		2		
15—20	— 53		=313	=313 Earners.
20—60	—258			
60 & over	—16			
	528			528

The distribution of the boys aged from 10 to 15 is so different to that shown in the adjoining Agency of Rajputana as to call for remark. Out of a total population of 560,292 persons no fewer than 119,524 or 21 per cent. are found in Ajmer City.

Ajmer City.

0—10	—128			
10—15	— 58		=202+16=218	N. W. D.
15—20	— 59	16		
		5		= 5 W. D.
		38		
20—60	—291		=329	=329 Earners.
60 & over	—16			
	552			552

A disproportionate number of males and a small proportion of working dependants cannot but have a disturbing effect on the figures for the Province as a whole. The proportion of 16 non-workers aged from 15—20 represents in actual figures 2,912 males and there are certainly not this number attending schools and colleges and therefore non-working dependants. A truer picture would therefore be obtained by assuming that a man's active life ceases before the age of 60, that the working dependants are aged from 10—15 and quite 50 out of 59 aged 15—20 are earners.

CHAPTER IX.

Literacy.

Reference to statistics.

135. For the purposes of census literacy was defined as the ability to write a letter and to read the answer to it, and the figures are therefore strictly comparable with those from 1901 onwards. They exclude those who can read but not write, of whom there is a considerable number, mostly Muslims able to read the Quran in Arabic. Particulars of this latter class have been recorded in Baroda State where they form 50 per mille of the population over 5 years old (males 32 females 18), but in the rest of India the population has been divided into literate and illiterate, alleged literates under the age of 5 being reckoned illiterate. The vernacular script of literacy was not generally recorded, and a reference to this point with such details as are available will be found in the following chapter on Language. Literacy in English was, as hitherto, recorded in a separate column. The general figures of literacy will be found in Table XIII of part ii of this volume, Table XIV containing figures by literacy for selected castes, while the main aspects of literacy will be found more conveniently exhibited by proportional figures at the end of this chapter.

Increase since 1921.

136. The actual number of literates has increased since 1921 by 5,515,205 persons, that is by 24·4 per cent. as compared to the increase in the total population of 10·6 per cent., and of 10·9 per cent. in the population enumerated by literacy. The literates in 1921 numbered 22,623,651, that is 7·1 per cent. of the total population; the actual increase of literates has been 16·3 per cent. of the actual increase of population, so that there has been an increase of literacy relative to the total population in 1931 as compared to 1921; but seeing that the total increase of population since then has been 33,895,298, although literacy has increased appreciably faster than the population, the percentage correspondingly literate now is still not more than 8·0. The marginal table shows the percentage of increase in each province taking its number of literates in 1921 as 100, and including in the provincial figures the figures of the states in political relations with each. The second table shows in the same way the states which formed separate census units. Excluding the Andamans and Nicobars, where the decrease is due to the abandonment of the penal settlement, the only unit showing a decrease is Aden. The provinces in order of extent of literacy in 1921 were Burma, Bengal, Madras, Bombay, Assam, Bihar and Orissa, North West Frontier Province, Central Provinces, Punjab and the United Provinces. To some extent therefore, but by no means consistently, most progress has been made where there was most room for it. Bihar and Orissa proves an exception, while Burma and to a less extent Assam have increased more rapidly than some provinces with more room for expansion. The order of literacy in the States and Agencies in 1921 was Travancore, Cochin, Baroda, Mysore, Sikkim, Gwalior, Rajputana, Central India, Hyderabad, Jammu and Kashmir, so that the same principle of an increase in literacy being most usual where there is most need of it is still at work, though Cochin and to a less extent Baroda are exceptional in a direction the reverse of Bihar and Orissa's. If the increases in states are noticeably higher on the whole than in British India, this is merely another instance of the same thing, as the states as a whole were behind British India in literacy in 1921, though Travancore, Cochin and Baroda were ahead of all units but Burma. In considering the proportion of literacy to the population, however, it is usual to exclude at least that part of the population aged 0—5 years, and also that part of the population (3,078,460) not enumerated

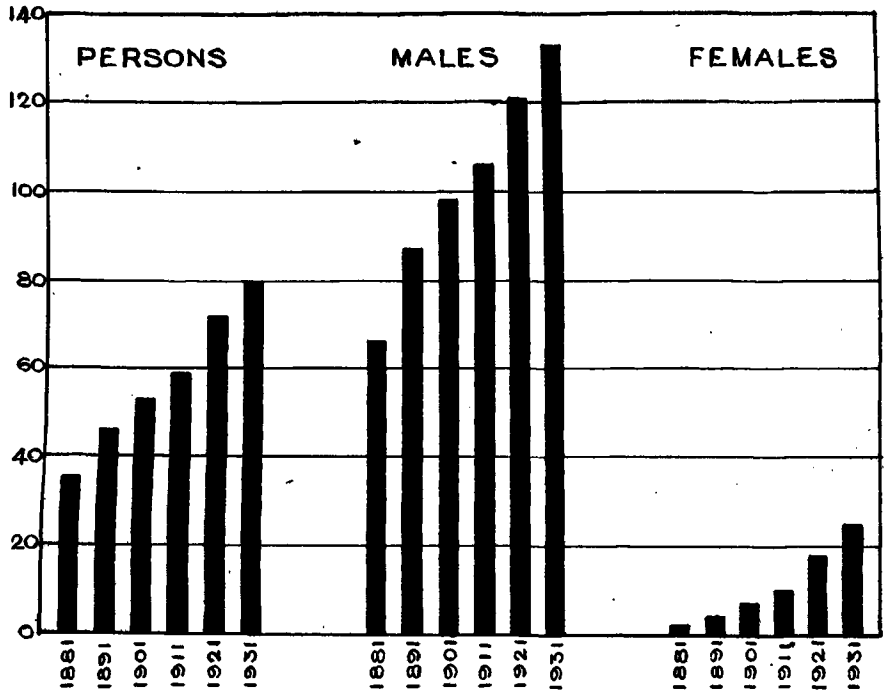
Increase % in Provinces (No. of literates 1921=100).

Delhi	+70·6
Punjab	+46·9
Assam	+41·0
Central Provinces and Berar	+38·1
United Provinces	+34·4
Burma	+27·2
INDIA	+24·4
Coorg	+22·7
Bombay	+20·9
North-West Frontier Province	+19·3
Madras	+19·1
Ajmer-Merwara	+19·1
Bengal	+ 9·7
Baluchistan	+ 9·1
Bihar and Orissa	+ 8·9
Andaman and Nicobar Islands	—13·4
Aden	—18·1

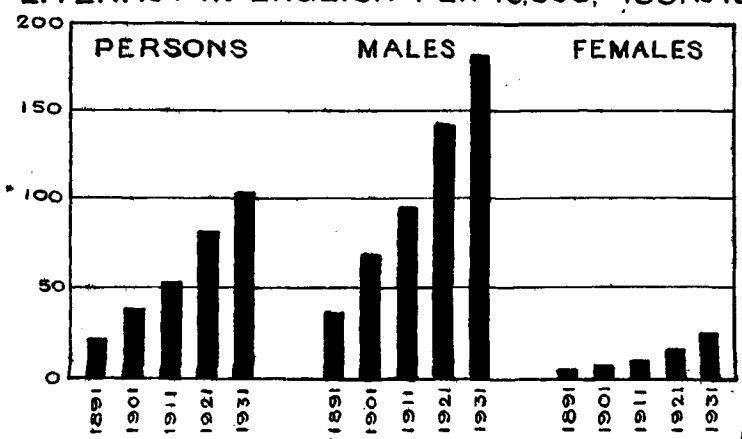
Increase % in States and Agencies (No. of literates 1921 = 100).

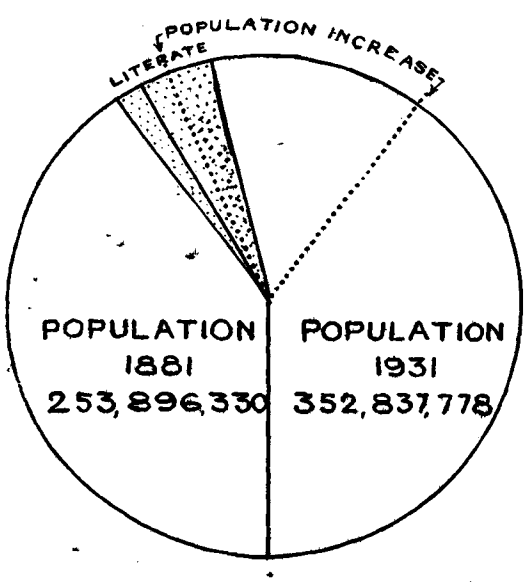
Cochin	+87·0
Jammu and Kashmir	+71·5
Hyderabad	+63·1
Baroda	+59·6
Central India	+55·3
Mysore	+34·2
Gwalior	+28·1
Travancore	+25·8
Rajputana	+22·4
Western India States	+20·7
Sikkim	+ 1·0

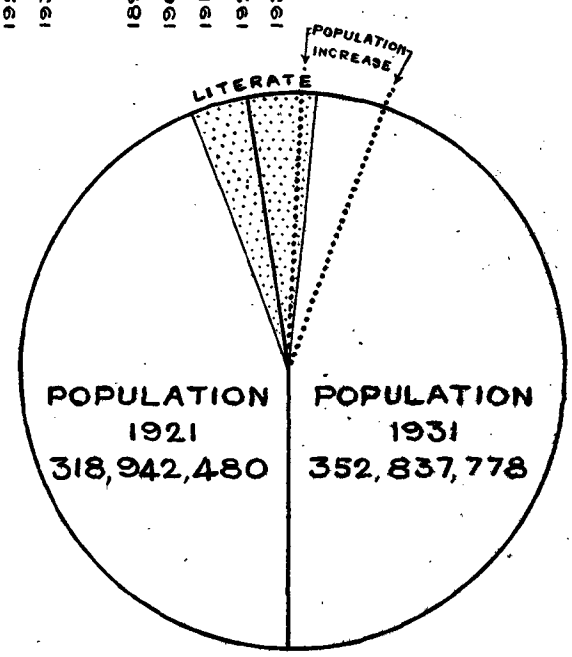
GROWTH OF LITERACY PER MILLE OF TOTAL POPULATION 1881-1931



LITERACY IN ENGLISH PER 10,000, 1891 TO 1931







IN THE TWO TOP DIAGRAMS THE POPULATION RETURNED AS "UNDER INSTRUCTION" "LEARNING" OR "UNSPECIFIED" HAS BEEN OMITTED. IN THE LEFT HAND BOTTOM DIAGRAM THOSE RETURNED IN 1881 AS "UNDER INSTRUCTION" HAVE BEEN INCLUDED AS LITERATE.

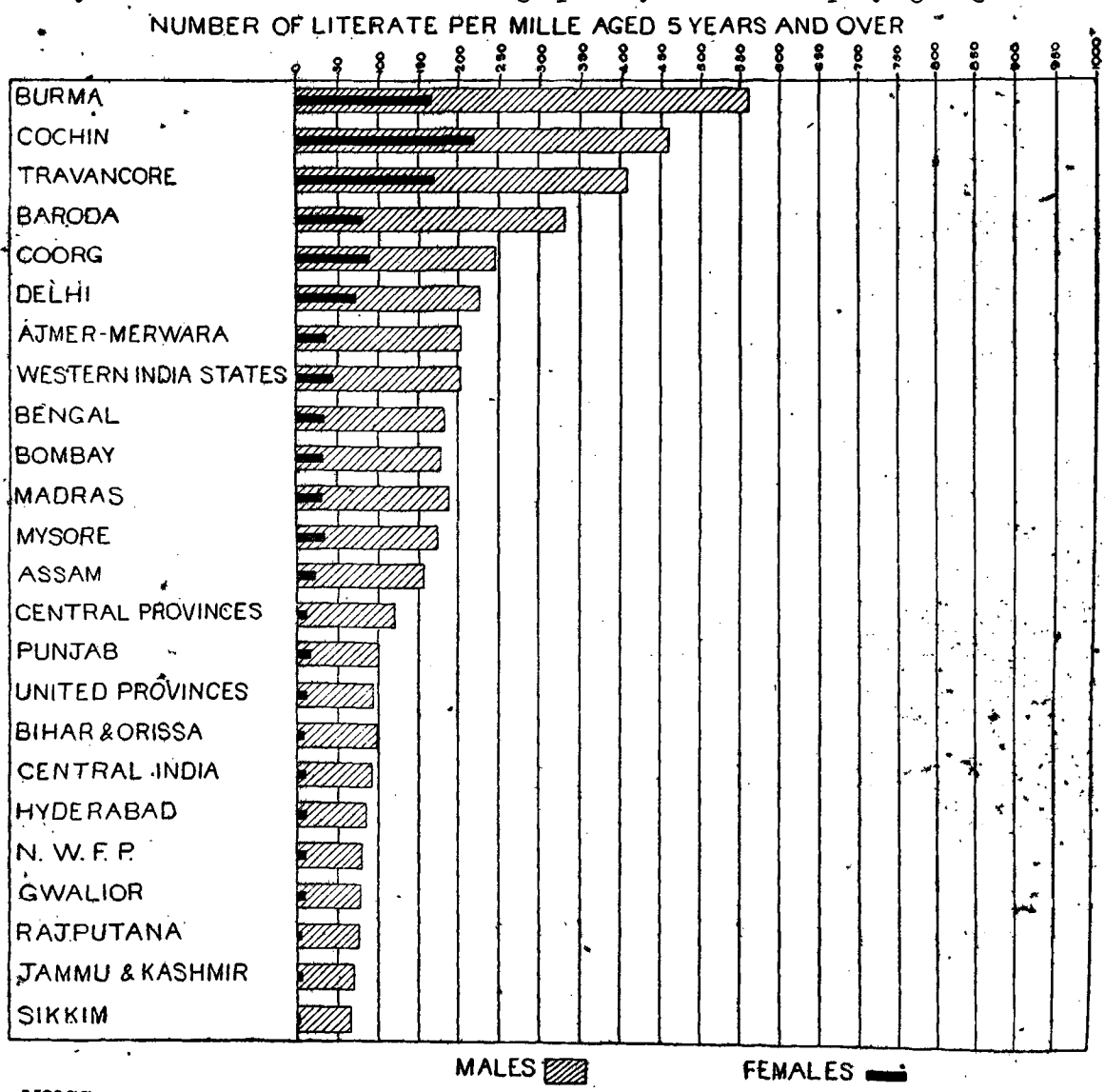
by literacy. The total population figure to be considered therefore with reference to the figure of literacy is 296,294,029 (males 153,770,850, females 142,523,179) and subsequent calculations will be based on that figure. The figures above represent the actual variation of literates since 1921 in each of the units named, but the real variation of literacy can only be accurately estimated by the variation of the ratio of literates to the population as a whole. A small increase in literates, such as that of 1 per cent. in Sikkim may, and in that case does, represent an actual decrease of literacy, which has failed to keep pace with a growth in population. The marginal table therefore shows the numbers literate per mille of the total population aged 5 and over, and of the corresponding male and female population separately, in 1931 as compared to 1921. Subsidiary Table V shows the growth per mille since 1901. Before that the classification of literacy was into illiterate, learning and literate, and in the diagram showing the growth of literacy since 1881 those shown as "under instruction" in 1881 and as "learning" in 1891 have been excluded from the total taken as literate, the loss of those who were under instruction but would in 1901 and after have been returned as 'literate' is perhaps balanced at any rate in 1881 by the exclusion of the very large number whose literacy or illiteracy was unspecified in the return and most of whom were probably illiterate; since 1901 the return has been 'literate' or 'illiterate' simply. The diagram is also based on the figures per mille of the total population, not on that aged 5 and over only. For the purpose of demonstrating growth the standard taken is immaterial and age groups are lacking in the literacy table of 1881.

Literates per mille aged 5 and over.

	1921.	1931.
Persons	*82*	95
Males	*139*	156
Females	*21*	29

137. The literacy of different provinces is given by ratio per mille in Subsidiary Table II at the end of this chapter, and its progress is illustrated in Subsidiary Table V. It is also illustrated graphically in the accompanying diagram

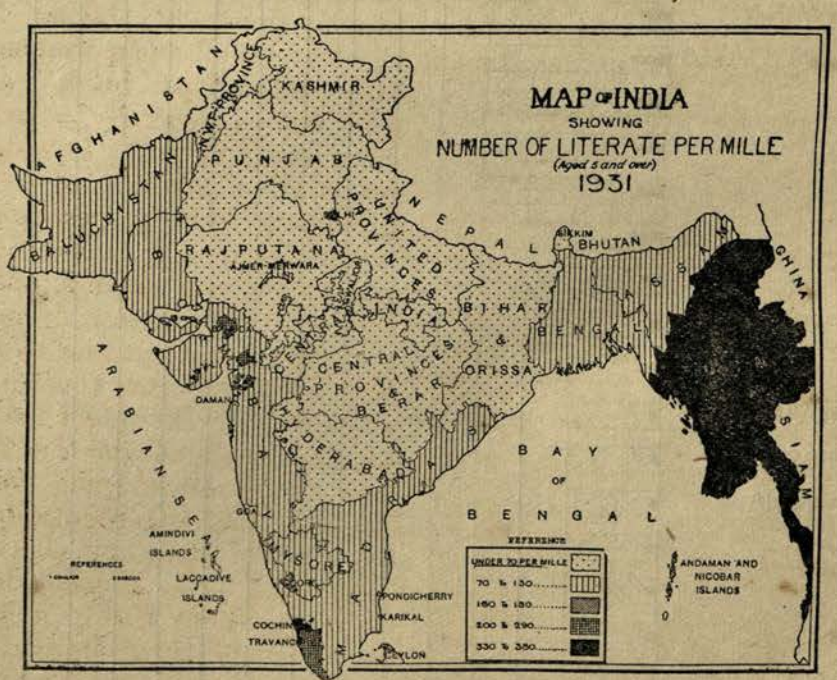
Distribution of Literacy.



based on the figures of provinces (British territory) and of major states. A warning must here be given against certain figures in the Subsidiary Tables. The exceptionally high figures for Baluchistan and the North-West Frontier Province Agencies and Tribal Areas are entirely misleading, as they are calculated on a very small proportion of the population consisting principally of troops and persons living in cantonments or frontier posts and having no reference at all to the real inhabitants of the area to which they refer. In the marginal table, the North-West Frontier Province agencies are omitted and the Baluchistan figures, British territory and States together, are calculated roughly on the whole population aged 5 and over instead of only on those enumerated by literacy; as however there are no figures for the whole population of Baluchistan by age, the figure for those aged five and over is only an estimate, and Baluchistan is given credit in the accompanying map for a somewhat higher rate. In comparing these figures with those of 1921 some difficulty is experienced in that the 1921 India Report gives no separate figures for provincial states, whereas on this occasion the figures for British India have been separated from those of the states in political relation with various provinces. The marginal table shows the present position of literacy calculated per mille of the population aged 5 and over for all provinces and states, taking the sexes together. This probably gives the truest impression of the real distribution of literacy, as a literacy which is confined to males is apt to be of rather a special nature, and, except in those castes or classes in which male literacy and learning is a natural heritage or a religious necessity, is apt to be a mere economic implement—necessary to business, a means of livelihood, a political weapon, or useful for intercourse with the external world, but of little value for

Province, State, etc.	Literate per mille aged 5 and over.
Burma	368
Cochin	337
Travancore	289
Baroda	209
Aden	182
Coorg	176
Andamans and Nicobars	170
Delhi	163
Ajmer-Merwara	125
Western India States	125
Madras States*	121
Bengal	111
Bombay†	108
Madras	108
Mysore	106
Assam	93
Bombay States	71
Central Provinces	66
Punjab	63
Assam States	61
Bengal States	61
United Provinces	55
Baluchistan	54
Bihar and Orissa	53
Central India	52
Hyderabad	50
North-West Frontier Province ..	49
United Provinces States	49
Gwalior	47
Rajputana	43
Punjab States	42
Punjab States Agency	42
Jammu and Kashmir	40
Bihar and Orissa States	39
Sikkim	35
Central Provinces States	23

**Excluding Cochin and Travancore.*
† Including Aden.



its own sake. It is not perhaps until literacy becomes a domestic acquisition taken for granted among members of both sexes, that it will cease to be regarded as a mere doorway into government or other service and principally valued for

its potentiality to that entry. The Census Superintendent of Cochin State ascribes a definite falling off in the number both of institutions and of pupils in the lower secondary and in the primary classes less to the general economic depression than to a growing realisation that literacy is losing its economic value as a qualification for a career. He points out that graduates of Madras University join the Police Department on a salary of Rs. 10 to Rs. 12 per month and are held fortunate in getting employment at all. On the other hand there is no falling off in the higher secondary classes but a continued increase, which he ascribes to such pupils having gone too far to withdraw. The falling off in primary education he rightly regards as a bad sign, and he argues the necessity of completely recasting the educational system. However that may be, the distribution of male literacy shows some divergence from that of general literacy, as may be seen in the accompanying diagram in which provinces and states are arranged in order of general literacy but in which male and female literacy are taken separately for graphic representation.

In the relative position of provinces and states in order of literacy there is little change during the decade. Cochin State, in spite of a very rapid growth in population, has been able to do more than keep pace with that growth, in spite of having started with a very high ratio. Burma easily maintains her lead, for there literacy even if not of a very high order, is a habit, traditional in both sexes and all classes, both boys and girls being taught in the monasteries of which almost every Burman village has at least one. No need perhaps for compulsory education here. In India however it had been introduced by 1930 in 133 urban areas and in 3,137 rural areas of which 2,303 are in the Punjab, though apparently with no very marked success.

Literacy in Cities.

138. It is a commonplace that literacy is much more prevalent in towns than in the country, as both the need for it and the opportunities of acquiring it are greater. Thus an examination of the 34 cities tabulated in Table XIII shows that of the total population the proportion literate per 1,000 is 348 males and 149 females as compared to 133 and 25 respectively in India as a whole. A reference may also be made in this respect to the table in paragraph 41 of chapter II. There is naturally a still greater contrast in literacy in English, the figures for the same 34 cities being 1,473 males literate in English per 10,000 of the total population and 434 females, as compared to 181 and 23 respectively for the whole of India.

Female Literacy.

139. The distribution of literacy among females has already been indicated when dealing with the distribution of literacy generally, and a reference to the diagram above will show that the extent of literacy among women is not necessarily determined by its extent among men, but is generally correlative though much less in extent. It will also show the comparative absence of female literacy throughout India proper except in Kerala. In the Bihar and Orissa States, to take an extreme case, there is only one literate female to every fifteen literate males, and in Sikkim less than one to every twenty-two; even in Burma there are 3·5 literate males to every literate female. In Kerala and Baroda alone is the situation other than in the rest of India, for Cochin State has more than one literate female to every two literate males and Travancore only a little less, while Malabar has nearly one to every three, Coorg a little less than one to every three, Baroda a little fewer and Mysore one to every five. Cochin now leads India in female literacy with Travancore a fair second and Burma a very close third. Comparative progress is illustrated in Subsidiary Table V at

Total number of literate females in

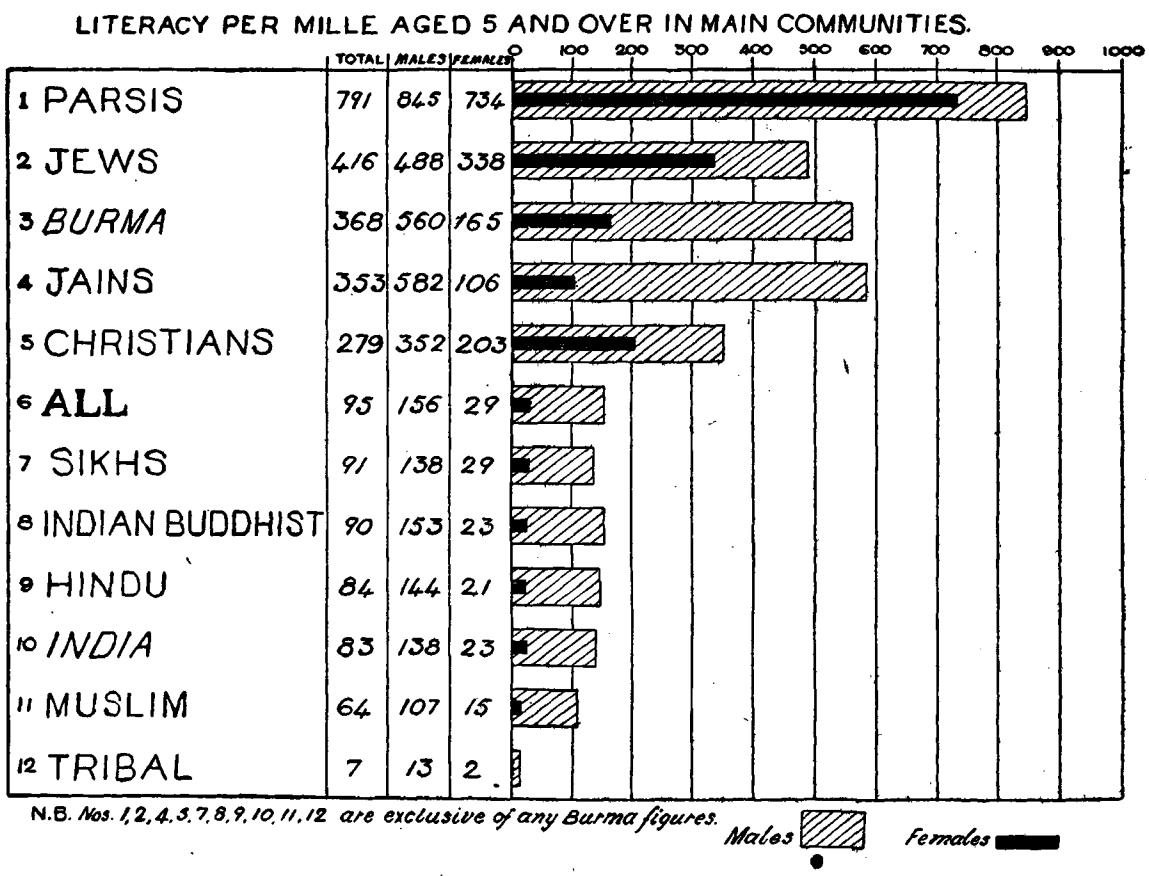
	1921.	1931.
India	*2,782,213*	4,169,105
Assam	*46,002*	81,133
Bengal	*407,831*	664,507
Bihar and Orissa ..	*109,735*	139,083
Bombay and Western India States.	*300,952*	372,154
Burma	*625,706*	1,010,298
Central Provinces ..	*52,304*	79,949
Madras	*456,895*	616,247
North-West Frontier Province.	8,987	11,412
Punjab and Punjab States Agency.	*78,339*	163,200
United Provinces ..	*134,004*	218,299
Baroda	*41,300*	79,667
Central India	*15,514*	25,572
Cochin	*49,320*	113,789
Gwalior	*9,689*	15,195
Hyderabad	*43,340*	68,039
Kashmir	*4,007*	9,078
Mysore	*57,023*	90,086
Rajputana	*18,851*	25,258
Sikkim	*118*	150
Travancore	296,067	351,611

the end of this chapter, and the marginal table gives the crude numbers for the larger provinces and states for 1921 and 1931, the figures of provinces being in this case inclusive of the states in political relation with them. It shows an increase of almost 50 per cent. against an increase of 11·4 per cent. in the female population enumerated by literacy, but the figures of female literacy are still absurdly low. Besides the difficulty, still felt very strongly in most provinces, of getting good women teachers, one of the most serious obstacles to the spread of female education is the early age of marriage, which causes girls to be taken from school before they have reached even the standard of the primary school leaving certificate. The report on Education in India in 1929-30 gives a table, reproduced in the margin, showing that of 1·3 million girls in class I only 26 per cent. went on to class II, of 311 thousand in class II only 63 per cent. went on to class III, and of 183 thousand in class III only 58 per cent. went on to class IV. The total wastage involved is about 90 per cent. Here we are found in a vicious circle, since the early age of marriages prevents the growth of female literacy, while the absence of female literacy seems largely responsible for the absence of any general change in the early age of marriage. Burma and the Malabar Coast are the two exceptions and in Cochin State an increasing tendency is reported for women to seek careers of their own in preference to marriage at all. For the extent of female literacy in different communities and in different castes, a reference may be made to the marginal tables given in paragraphs 140 and 141 below.

Class.	1928-29.	1929-30.	Wastage.
I	1,317,575	..	..
II	311,281	340,221	977,354
III ..	183,143	197,231	113,960
IV ..	93,234	105,665	77,478

Literacy by community.

140. The accompanying diagram shows the number per mille literate in each sex in the different main religions and in Burma. Owing to the tabulation's having



been based on racial instead of religious groups in Burma the figures of literacy by religion are to this extent discrepant with those of last census as the latter included Hindus, Muslims, etc., in Burma, whereas the present ones are confined to India proper and the figures for Burma are not distinguished by religion except in the case of Hindus and Muslims. This being so it has been thought better here as elsewhere to show Burma as a single unit in the subsidiary tables in this chapter;

it is predominantly composed, of course, of Burmese Buddhists, and though figures for Indian Hindus, Indian Muslims and other Indians will be found in Table XIII, the general standard of literacy in Burma is determined by that of the Buddhist Burmese. Taking the figures as a whole, the greatest progress has been made by Sikhs, Jains, Muslims, and Hindus in that order, while Tribal, Parsis and Christians have all declined in their proportion of literacy since 1921. The unexpected decline among Parsis is confined to males and it is just possible that it can be ascribed to the economic depression. The decline among both Christians and Tribal is to be put down if not wholly at any rate in part, to the exclusion of Burma figures, though it is also possible that the figures of Christians have suffered by the inclusion of illiterate converts and those of Tribal by the return of literate tribesmen as Hindus. The marginal table shows the variations in the descending order of total increase, but it will be noticed that this order is not always retained if the sexes are taken separately. Thus both Parsis and Tribal show a slight increase in feminine literacy in spite of the fall of literacy on their whole population. Again Jains although only second in the rate of growth of general literacy come first in growth in literacy among females, but are behind both Hindus and Muslims in growth among males. The growth in Sikh literacy is noticeable, as they showed hardly any increase at all in the preceding decade and the Census Superintendent of the Punjab in 1921 wrote of their educational stagnation. This time they easily lead in rate of increase except among women, where they are second to the Jains. It is hardly necessary to point out that the high standard of literacy among Parsis, Jews and Jains is partly due to the fact that they are mainly composed of trading classes for whom literacy is essential, and that where literacy is so general as it is among the Parsis, for instance, the rate of growth per mille is not strictly comparable to the rate of growth in a comparatively illiterate community. At the same time it is noteworthy that in Burma where the prevalence of literacy is much greater than in any Indian communities except Parsis and Jains the rate of increase should be as high as 51 per mille for the total population and 50 and 53 for males and females respectively.

Variation in literacy per mille, 1921—1931.

Community.	Total.	Males.	Females.
Sikh	+23	+31	+13
Jain	+12	+7	+19
Muslim	+11	+14	+6
Hindu	+9	+14	+5
Tribal	—2	—3	+1
Parsi	—3	—9	+3
Christian	—6	—3	—7

In considering literacy among the different communities it will perhaps be useful to examine briefly their respective position with regard to literacy of 20 years and over, since such figures might affect any franchise based on literacy. The marginal table gives the figures of literates per mille aged 20 and over by communities for adults only of both sexes as compared to the figure when the whole population over 5 years is considered. If females alone be considered the difference between the comparative figures is more marked and the order they appear in is in one case different, as Christians have a higher proportion of literate females than Jains have. Literacy figures by religion and sex for the various provinces will be found in Subsidiary Table III at the end of this chapter. The following table shows the number literate in British territory in each province in each main community per mille (1) of adults of

Community.	Literates per mille	
	aged 5 and over.	aged 20 and over.
Parsi	791	851
Jewish	416	482
Jain	353	389
Christian	279	305
Sikh	91	107
Hindu	84	96
Muslim	64	77
Minor and Unspecified ..	19	23
Tribal	7	8
Burma	*368*	*427*

Community.	Literate females per mille	
	aged 5 and over.	aged 20 and over.
Parsi	734	780
Jewish	338	368
Christian	203	200
Jain	106	90
Sikh	29	29
Hindu	21	19
Muslim	15	14
Minor and Unspecified ..	5	5
Tribal	2	1
Burma	*165*	*171*

the community concerned, (2) of all adults in the province :—

Province, etc.	Hindu. Literates per mille aged 20 and over.		Muslim. Literates per mille aged 20 and over.		Christian. Literates per mille aged 20 and over.		Tribal. Literates per mille aged 20 and over.	
	Of own community.	Of all communities.	Of own community.	Of all communities.	Of own community.	Of all communities.	Of own community.	Of all communities.
India (*excluding Burma*)	96	69	77	17	305	5	8	·2
Ajmer-Merwara ..	113	87	143	24	887	11	3	.01
Assam*	127	74	83	23	232	6	21	2
Bengal	180	83	85	44	496	2	11	·1
Bihar and Orissa ..	64	53	*Separate details not available*				8	·4
Bombay (*excluding Aden*).	118	90	86	18	420	6	5	.03
Central Provinces and Berar.	71	61	180	8	595	2	7	·6
Coorg	195	172	173	16	387	9	0	0
Delhi	170	107	177	56	581	17	0	0
Madras	120	106	154	10	229	8	3	.002
North-West Frontier Province.	335	21	28	25	834	6	0	0
Punjab	123	34	39	22	123	2	0	0
United Provinces Agra and Oudh.	59	50	68	10	317	1	0	0

N.B.—The use of 0 implies the absence of any of that community in the province.
* Assam includes the States, elsewhere excluded, except for India as a whole.

It will be seen that under each community the left-hand column read downwards shows the relative literacy of that community in the different provinces, while the right hand columns read across show the proportions per 1,000 adults in each province who are literate in each of the four communities. Tribal figures are shown in this table as, numerically at any rate, they are the fourth most important community in India excluding Burma, while in literacy they are exceptionally backward. In certain provinces however there are other communities of much local importance. Thus in Bombay **Parsis**, aged 20 and over have 853 literates per 1,000 of their own community and 4 per 1,000 of the adults in the province. In the same province **Jains** have 391 literate of every 1,000 adults and very nearly 4 literate of every 1,000 adults in the province. Of every 1,000 literates in Bombay Province 30 are Jains and 32 are Parsis. In the Punjab **Sikhs** have 110 literate of every 1,000 adult, 15 literate in every 1,000 adults of the province, and 1·0 literate in every 1,000 adults in India proper; of literate adults in the Punjab 200 in every 1,000 are Sikhs. Literacy in Burma has been tabulated by race, qualified in the case of Indians by the differentiation of Hindus and Muslims. The marginal table shows the figures corresponding to those in the table above for India. The difference in literacy between Burma and India is very marked.

Literacy per mille aged 20 and over in Burma.

	of own race.	of all races.
Burmans	530	307
Other Indigenous ..	257	79
Indo-Burmans ..	346	4
Indian Hindus ..	314	15
Indian Muslims ..	349	10
Other Indians ..	514	2
Chinese	414	6
Others	961	3

Literacy by Caste.

141. The two dozen castes and tribes shown in the marginal table arranged in order of total literacy per mille indicate the extreme variation of literacy among different social or racial groups. It is not possible to give more than a sample here, and even the much larger number appearing in Table XIV, where castes are shown by literacy and by province, is merely a brief selection by way of illustrating the great divergence between the literacy of different castes in India and between the same castes in different provinces. The proportionate figures for the same castes are given with reference to locality in subsidiary table V at the end of this chapter where comparative figures for 1921 are available. Those with a high social status are not by any means always so high in order of literacy, though of necessity the trading classes are always

Caste or Tribe.	Literate per mille. Males.	Females.
Baidhya	782	486
Nayar	603	276
Kayastha	607	191
Khatri	451	126
Brahman	437	96
Lushei	260	31
Viswabrahman.. ..	197	21
Rajput	153	13
Kurmi	126	12
Teli	114	6
Mali	80	4
Momin	59	8
Parayan	56	6
Jat	53	6
Mahar	44	4
Oraon	35	11
Yadava	39	2
Kumhar	35	4
Bhangi	19	2
Baloch	19	1
Dom	16	2
Gond	16	1
Bhil	11	1
Chamar	10	1

high in male literacy, while the figures of feminine literacy do not necessarily correspond at all to those of masculine, except that they are naturally always less than the latter in the same group; only among the Baidhyas of Bengal and Assam do they reach 50 per cent. of the male figure. The primitive tribes generally are very low in the list except in Assam, where the Lushei show how literate an isolated hill tribe may become when given the opportunity. The high literacy of the Malabar Coast is exemplified in this list by the Nayars, but the high literacy of that coast, and of Travancore and Cochin States, in particular, has influenced the figures of some other castes including even those of the Paraiyans. As regards literacy among exterior castes the proportion per mille literate in each province and the total per mille literate in British provinces and in the States is shown in the marginal table; in India as a whole the exterior castes of Hinduism are a little better equipped than the primitive tribes, but not very much. The details of the castes contributing to the marginal figures are different in different provinces and are detailed in the appendix on the Exterior Castes at the end of this volume. The primitive tribes are very many of them greatly handicapped in the acquisition of literacy by the fact that they are so often given their primary education in a language which is not their own. This is not the case in Assam, where the local vernacular is usually used in primary schools in hill districts, a policy the results of which are reflected in the literacy of the Lusheis and Khasis; if the Nagas are backward it is to be put down largely to the incredibly polyglot nature of their habitat where there are as many vernaculars in a small area as will be found in the rest of India outside Assam and Burma. Generally however the policy seems to be to use the vernacular of the adjacent plains for the primary instruction of hill tribes, and the backwardness of the Santals, for instance, in literacy is attributed by Mr. P. O. Bodding, the best authority on that tribe, to that policy. As regards the difficulties in the way of acquisition of literacy by the depressed classes reference may be made to Appendix I to this volume, on the Exterior Castes.

Literacy among the Exterior Castes.

Province.	Literate per mille.	Province.	Literate per mille.
Baluchistan ..	69	*Total Provinces* ..	*16*
Bengal	50	Central Provinces ..	15
North-West Frontier Province.	36	Coorg	15
		Madras	15
Assam	31	Delhi	14
Total States ..	*31*	Punjab	8
Bombay	28	Bihar and Orissa ..	6
Ajmer-Merwara ..	22	United Provinces ..	5
India	*19*		

142. In any comparison between literacy in 1931 and in 1921 there is one factor that has to be borne in mind which has already been examined in Chapter VI, and that is the method of sorting by age. The number of literates at any given year will not necessarily be proportional to the total number of that year living, and when the years are grouped the upper limit of any group will contain a higher proportion of literates than the lower until majority is reached. The method of sorting therefore will exclude from the group 5 to 10 a certain number who have appeared in that group in 1921. Some of these will be correctly excluded owing to the preference for the digit 5 which then depleted in some degree the 4 year group in favour of the higher age, but probably more than the correct number will be excluded. This matters little enough as far as real literacy is concerned, as literacy at the age of 5 is only nominal, but the comparative values will suffer a little, the actual position as compared to 1921 being really a little better than the bare figures indicate. The comparable value of the other figures of literacy by age will similarly be slightly impaired in regard to 1921, but the total figure of literacy of course only loses by the small number unduly excluded from the group 5—10 to the group 0—5, and this number can probably be ignored for practical purposes. Subject to this caution we may proceed to compare the figures of literacy at different ages. The marginal table contains the figures per mille for the different age groups in 1921 and 1931. Except for males aged 10-15 there has in all groups been a marked increase particu-

Literacy by Age.

Literacy per mille.

Aged.	1921. Males.	1921. Females.	1931. Males.	1931. Females.
5—10	*29*	*10*	59	20
10—15	*110*	*28*	109	34
15-20	*174*	*36*	195	44
20 and over	*171*	*20*	185	28

larly in the proportion of literate females. In the lowest age group the numbers literate have doubled, and the loss in the 10—15 group is only 1 per mille in males, females gaining by 6 per mille. In 1921 also it was this group which showed the lowest ratio of increase over 1911. After group 5—10, group 15—20 shows the next highest increase. It is this group which is usually regarded as most indicative of the growth of literacy, and the lower ratio of the subsequent group is in accordance with normal expectations. Obviously however this need not be necessarily or permanently the case, since once literacy becomes general the reduction in literacy aged 20 and over will depend on the relative proportion of literate to illiterate deaths and on the extent to which literacy is lost. Generally speaking it seems likely that the average literate leads a life less exposed to casual dangers than the average illiterate does, while there is less tendency to lose literacy if its use is involved in the calling pursued. It is perhaps natural therefore that among Parsis, the most longlived community in India, and also one which is mostly engaged in trade and unlikely to suffer from loss of literacy, the ratio of literacy should be even higher above the age of 20 than it is from 15 to 20, and the same considerations may explain the same phenomenon among male Jews. It is also to be seen however among Burmese and among Indian Buddhists (*vide* Subsidiary Table I at the end of this chapter), and the explanations suggested in the India Report 1911 do not seem to account for this satisfactorily. Possibly the case of Burma is met by the fact that literacy is general enough among males to prevent any excess in the ratio literate from 15 to 20, but this explanation cannot be applied to Indian Buddhists.

Literacy in English.

143. Literacy in English has increased, that is in ratio to the numbers of the community, among all communities except Christians, where it has failed to keep pace with the growth in numbers. Sikhs have shown the most rapid increase, having very nearly doubled their ratio during the decade, the next highest proportional increase being among Muslims. Subsidiary Table I shows the distribution of literacy in English among communities, Subsidiary Table IV shows it by age, sex and province, and gives comparative figures for 1921 and 1911. The proportional figures are too small to show conveniently per 1,000, so figures of literacy in English are given per 10,000 of the population aged 5 and over. The Parsis have 5,041, Jews 2,636, Christians 919, Jains 306, Sikhs 151, Indian Buddhists 119, Hindus 113, Muslims 92 and Tribal 4 persons literate in English in every 10,000 of their population. As regards the provinces the figures are again deceptive unless read with caution. The figures for Baluchistan are fictitious for the reasons given in paragraph 137 above; Delhi and Ajmer-Merwara show high figures on account of the very high proportion of urban population. As pointed out in paragraph 138 above, literacy in English is particularly high in cities on account of the greater opportunities for its acquisition and its greater economic value in use. The high figures of the Andamans and Nicobars are also more or less artificial. Cochin State really leads in literacy in English with 307 so literate per 10,000 of her population aged 5 and over. Coorg follows with 238, Bengal being third with 211. The next is Travancore State with 158. The figures of literacy in English by caste are interesting, as these figures show some divergence from those for vernacular literacy, and the marginal table may be compared with that given in paragraph 141 above.

Caste.	Literate in English per 10,000 of population.	
	Males.	Females.
Baidhya	5,279	1,373
Kayastha	2,418	293
Khatri	1,320	109
Brahman	1,073	86
Nayar	693	137
Lushei	160	9
Rajput	135	5
Viswabrahman.. ..	86	4
Jat	70	3
Kunbi	69	2
Mali	53	2
Oraon	46	9
Teli	48	0·5
Momin	43	6
Parayan	25	3
Yadava	23	1
Mahar	15	0·8
Kumhar	16	0·5
Baloch	17	0·4
Dom	9	0·9
Bhangi	6	2
Gond	4	0·4
Chamar	3	0·3
Bhil	1	..

Literacy for Franchise.

144. It was suggested when the advent of the Franchise Committee was at hand in 1931 that figures should be obtained at the census of all persons who had reached the leaving standard of primary schools, since such statistics would be useful if any decision were made to base the franchise on some such qualification. It was however found impossible to devise any uniform definition of the necessary standard which could be applied to all provinces. Apart from this it is obvious that the possession of a

school leaving certificate, or another of a similar description, applied as a test of literacy would leave unqualified a large number of persons who are literate but possess no such certificate. Some will have left school before such certificates were given at all; others will have neglected to sit for the examination; others again will have acquired literacy by private tuition, at a private institution, or in the course of business. It is very doubtful therefore if such a test could conveniently be made use of in determining the qualification for franchise. Many provinces and states however did undertake an enquiry of this kind and the results are referred to in the provincial reports.

It is perhaps worth while in this connection to reproduce here an interesting paragraph from the Central Provinces Report. The Census Superintendent writes:

"It seems proper, at a time when Franchise problems are claiming much attention, to place on record some figures to show to what extent the various tribes, castes and communities of the province are represented in the local Legislative Council. The subjoined table gives those figures:—

Name of caste.	Number of elected members in				Number of nominated members in			
	First Council.	Second Council.	Third Council.	Council of 1931.	First Council.	Second Council.	Third Council.	Council of 1931.
Maratha Brahmin ..	10	19	11	3	1	..	1	3
Other Brahmins ..	11	10	6	7	..	1	..	..
Prabhu ..	2	1	3	..	..	1	..	2
Rajput	1	2	2	..	..	..	..	1
Bania	6	5	9	2	..	..	..	..
Kayastha	2	2	1	2	1	..	..	..
Maratha and Kunbi	7	6	9	2	..	..	..	6
Madrasi non-Brahmin	..	1	1	1	..	..	..	..
Vidur	..	..	2	..	..	..	..	..
Kalar	1	..	2	2	..	..	..	..
Gond	..	..	..	..	..	..	1	..
Mahar	..	..	..	..	2	2	3	..
Chamar	1	..	..	..	..	..	1	..
Jaiswara	..	..	..	1	..	..	..	..
Barber	..	..	..	3	..	..	..	..
Gwala	..	..	..	1	..	..	..	..
Other Hindus ..	3	..	1	4	1	1	..	2
Christian	2	1	1	1	2	2	2	..
Parsee	1	..	..	3	..	..	..	..
Muslim	6	7	7	4	1	1	..	3

The figures tell their own story. The note below recorded after the third Council explains the tendencies, further rapid development of which is evident from the statistics of 1931. The growth of the strength of the non-Brahmin party is obvious. The inadequate representation of the aboriginal tribes is most striking.

The strongest elements purely from the point of view of caste are the Brahmins, Banias and Marathas and Kunbis. Of these, the Maratha Brahmins and the Marathas and Kunbis each represent communities closely bound by caste, customs and geographical distribution, whilst "Other Brahmins" and "Banias" comprise a number of widely differing castes, in origin mostly foreign to the province, and possessing no such common characteristic as would constitute either of them distinct political entities. It will be noticed that Brahmins were most strongly represented in the second Council when the Swarajists decided to participate in the elections for the first time. The solidity of the Maratha Brahmin element will be realised when it is stated that they then held 14 out of the 24 non-Muhammadan seats in the Berar and Nagpur divisions. This number is now reduced to 8. The total number of Brahmins shows a heavy fall from 29 in the second Council to 17 in the present Council, justifying the inference that a political consciousness is being evoked in other communities. Even now, however, the higher castes account for over two-thirds of the members elected from general constituencies, and the only challenge, slight though it is, to their predominance, comes from the Maratha Kunbis who have succeeded in increasing their numbers in the Council and reproduce a powerful element in the electorate. Only one member of the depressed classes has been elected, and that in the first Council when owing to the boycott there was little competition. The number of members nominated from the depressed classes has been raised from two to four in the third Council, and is made up of three Mahars and one Chamar."

Mr. Shoobert has drawn attention to the inadequate representation of the aboriginal tribes. It should be explained that these tribes number over four million in the Central Provinces and attached states, and form between a fifth and a quarter of the total population, 1,969,214 being adherents of tribal religions while the remainder were returned as Hindus or Christians, but mainly as Hindus.

Comparison with returns of the Education Department.

145. Some comparison is necessary between the figures of literacy returned at the census and the figures compiled by the Education Department showing the number of schools, colleges and other educational institutions, the pupils under instruction, and their proportion in different provinces and communities in British India. The departmental figures are taken from *Education in India, 1930-31*. The first marginal table therefore shows the number of pupils in 1931 distributed between the different communities and their ratio per mille on the figures of the same communities as obtained by the census returns. These ratios may be compared with the ratio of literacy in the same communities given above in paragraph 140. For calculating the ratio of Buddhists, Burmese have been taken as equivalent to 'Buddhists' in Burma. The exact ratio is uncertain as there are many literate Shans and other Buddhists in Burma who are not included under the term Burmese, and probably many illiterate also. In any case the number of the Department's pupils in Burma bears little relation to vernacular literacy in that province.

Community.	No. of pupils 1931 (Education Department's).	No. per mille of community (1931 census).
Parsis	19,790	205
Europeans and Anglo-Indians.	50,084	185
Indian Christians ..	418,934	120
Sikhs	195,814	61
Buddhists	653,071	52
Muslims	3,357,593	50
Hindus	7,821,007	44
Others	171,915	25
Total ..	12,688,308	46

The second table below shows the number of institutions and the number of pupils in them in 1921 and in 1931 and the percentage of variation :—

Institutions.	Number in		Increase per cent.	Number of pupils.		Increase per cent.
	1921.	1931.		*1921.*	1931.	
Universities	13	16		..	8,189	
Arts Colleges	*154*	244	58	*46,737*	66,837	43
Professional Colleges	*66*	73	11	*12,903*	17,002	32
Secondary Schools	*8,816*	13,581	54	*1,237,656*	2,286,411	85
Primary Schools	*158,792*	204,384	29	*6,299,836*	9,362,748	49
Special Schools	*3,946*	8,891	125	*126,758*	315,650	149
Unrecognised Institutions	*33,229*	34,879	5	*592,975*	632,249	7
Total ..	*205,016*	262,068	28	*8,316,865*	12,689,086	53

It is to be noticed that 74 per cent. of the pupils are in primary schools, a decline of 2 per cent. in the proportion of primary pupils during the decade, so that the already unduly low proportion of primary to secondary education appeared to be falling instead of rising. This aspect of the relation between the two is indicated by the comparative rates of growth (*vide* Subsidiary Table VII at the end of this chapter). While since 1901 the number of primary schools has increased by 110 per cent., those of secondary schools have increased by 151 per cent. and those of colleges by 71 per cent. ; again since 1921 the growth in the number of primary schools has been 28 per cent. only, whereas secondary schools and colleges have increased by 51 per cent. and 44 per cent. respectively. This point is further emphasised by the statement of expenditure. About half the money spent on education is contributed by Government, and of the whole amount, after the exclusion of Direction, Inspection, Buildings, Universities, Boards, Special Schools, and Miscellaneous, we find that Rs. 6,82,07,867 are spent on primary education as compared to Rs. 9,45,23,607 on secondary. Admittedly primary education cannot be extended without spending money on secondary education, but the sums spent on the latter and the number of pupils under secondary instruction appear disproportionately high in view of

the large illiterate population. It has been estimated that about two-thirds of the villages in India have no schools, and for the 500,000 census villages in British territory the Education Department figures show little over 200,000 recognised schools, while the addition of all unrecognised rural schools fails to bring the total to 230,000. The average cost per pupil in all recognised institutions worked out at just over Rs. 23 for 1930, but a separate analysis of the cost of primary and secondary pupils respectively gave Rs. 8-5-5 and Rs. 179-4-3 as the cost of each primary and each secondary male pupil for that year, and Rs. 10-3-6 and Rs. 467-3-5 respectively as the corresponding costs of each female pupil (*vide Education in India, 1929-1930*). The high cost of girl pupils is no doubt due in a great degree to their comparative paucity, and is to that extent unavoidable, but the figures do suggest that the amount spent on secondary education is disproportionate to that spent on primary. The reason is simple enough. As a result of the caste system there is an insistent demand for education on the part of those castes who have been accustomed to look to literacy to provide them with a livelihood, and their tendency under competition is to demand higher education. On the other hand there is no widespread demand among other castes for education at all, and this is illustrated by the tremendous wastage in primary schools. This amounts to two-thirds of the total in the case of boys and a great deal more than that in the case of girls, who are apt to leave school when they are married.

This wastage again explains the inordinate excess of pupils shown by the Education Department as under instruction over the numbers returned as literate aged 5—20 by the census, which might have been expected to show some relation to the number of pupils. The comparative figures are shown in the third marginal table, which shows also for comparison the number returned at the census as literate, 20 years and over. These figures may be regarded perhaps as those of effective literacy, which really only begins at about 20 years, and if they appear unduly low when compared to the figures of pupils under instruction, this must be put down to the wastage already mentioned which involves a discard of at least two-thirds of the primary pupils, that is of a half of the total number of pupils. Burma is of course exceptional as most of her literacy is obtained in village monasteries and not through the Education Department. The high figure of Delhi is no doubt due in part to its being mainly an urban area and in part to the concentration there of ministerial officers of Government and their families.

Province.	No. of pupils, 1931, per 1,000 of population aged 5 and over.	Numbers returned as literate at census per 1,000 of population aged 5 and over.	
		Aged 5—20.	Aged 20 and over.
Ajmer-Merwara	40	38	87
Assam*	44	29	62
Baluchistan†	12	14	40
Bengal	63	34	77
Bihar and Orissa	32	15	38
Bombay	67	33	75
Burma	43	106	262
Central Provinces	33	21	45
Coorg	69	53	123
Delhi	73	46	117
Madras	72	32	76
North-West Frontier Province ..	40	14	35
Punjab	63	20	43
United Provinces..	35	17	38

* The figures on which the Assam ratios are calculated include those of Assam States.

† The figures, in which States are again included, are calculated on an estimated figure for the population aged 5 and over, as returns by age and literacy apply only to a small portion of the population.

The Education Department consider that four years at school is required to give permanent literacy, and that the number of literates turned out in any year can therefore be gauged by the number of pupils reading in Class IV in that year. The marginal figures give their numbers annually for the past decade, making a total of 7,660,419. Of these persons it is considered that at least 20% and possibly as much as 25% would be found unfit for promotion, that is to say they have not been rendered permanently literate, so that almost that portion of them may be regarded as having already relapsed into illiteracy by 1931, resulting in a minimum estimate of

Year.	No. of class IV pupils in British India.
1922	635,604
1923	646,962
1924	672,412
1925	668,345
1926	710,895
1927	767,921
1928	803,155
1929	857,409
1930	899,619
1931	998,097
Total ..	7,660,419

5,750,000 persons rendered literate in British India during the decade. Now the actual increase in the number of literates in British India since 1921 is 4,073,030 a figure which is fairly comparable with the Education Department's estimate when allowance has been made both for the decrease to be replaced among previous literates on account of their normal mortality during the decade and for casualties among the new literates themselves.

	Total number of literates in India in	
	1921.	1931.
India ..	22,623,651	28,131,315
Provinces ..	18,654,541	22,727,571
States ..	3,969,110	5,403,744

The next marginal table, for comparison with the number of pupils per mille of population shown in the third, shows the number of pupils of the Exterior Castes and the ratio of literacy returned by members of these castes at the census. It should be explained that the departmental figures of depressed class pupils have been taken and the ratio per mille at school calculated on the census figures of the Exterior Castes for the various provinces shown. It is possible that the actual castes treated as depressed or exterior do not entirely correspond, and although the difference is likely to be small, except perhaps in Bengal, where the figures include all "educationally backward" classes, the ratios must be treated with caution on this account. It should be added that the census figures for literacy in exterior castes are not quite complete as literacy figures were not available for about 8 per cent. of those treated as exterior. The ratio however has been calculated on the remaining 92 per cent., so that the small deficiency affects only the third column of the table.

Province.	Depressed class pupils (Education Department).	Exterior castes literate at census.	Number per mille of exterior castes	
			at school.	literate.
Bengal	433,686	230,206	54	50
Bihar and Orissa ..	24,187	32,150	4	6
Bombay	62,903	49,012	36	28
Central Provinces ..	43,008	43,886	15	15
Madras	352,162	107,817	48	15
Punjab	36,279	10,384	30	8
United Provinces ..	125,383	42,858	11	5

The final table in this paragraph shows the number of schools for defectives and the number of pupils attending them according to the Education Department's returns, together with the ratio of those under instruction to the total number of blind and deafmute aged 0—20 as returned at the census from each province possessing schools of this nature. In addition to the schools shown in the statement there is a mission school for the blind at Rajpur, Dehra Dun, for which statistics are not available. The totals in the fourth and seventh columns include certain figures for institutions or for pupils whose precise classification as blind or deafmute is unknown. The percentage in the last three columns suggest that the instruction provided by these schools for the defective is virtually irrelevant.

Province.	Number of schools.			Number of pupils.			Number aged 0—20 at census.			Percentage under instruction.		
	For deaf-mute.	For the blind.	Total.	Deaf-mute.	Blind.	Total.	Deaf-mute.	Blind.	Total.	Deaf-mute.	Blind.	Total.
Bengal ..	5	1	6	237	80	317	17,429	6,332	23,761	1·4	1·3	1·3
Bihar and Orissa ..	0	2	2	0	79	79	11,068	9,712	20,780	0	·8	·04
Bombay ..	4	3	7	169	125	294	6,491	5,749	12,240	2·6	2·2	2·4
Burma	1	2	3	24	48	72	5,778	2,753	8,531	·4	1·7	·8
Central Provinces ..	1	1	2	20	18	38	3,884	5,156	9,040	·5	·3	·4
Madras	3	4	6*	115	198	370	15,869	7,130	22,999	·7	2·8	1·6
Punjab	..	1	2	..	26	62	7,215	6,986	14,201	..	·4	·4
United Provinces ..	..	1	1	0	12	12	10,424	19,399	29,823	0	·006	·004

* One institution is combined.

Educated Unemployed.

146. In response to requests from several quarters it was decided to attempt at the 1931 census to obtain figures of the educated unemployed generally believed to be exceedingly high. The general schedule was already inconveniently crowded, and as the return was intended to touch only those who were fully literate a separate schedule was prepared to be filled in by the enumerated himself and not by the enumerator. The instructions on the form employed stated that the information was required in the interest of the public, of the State and of the unemployed themselves, and it might have been anticipated that a general response would have been

made to this effort to obtain information. The attempt was however a failure, as though many forms were issued very few were filled in and returned to the enumerators, and although some provinces and states obtained figures which they considered were worth incorporating in their statistical tables, the results for India as a whole were so unsatisfactory that the figures must have been misleading if credited, and it was decided to omit them from part II of the India volume. Such as they are, they are included in this chapter, but the degree of their probable understatement may be inferred by a comparison of the figures with those obtainable from the Education Department. The latter showed that there were, in 1930, 25,716 candidates who passed for matriculation, 13,633 who passed the Intermediate Arts or Science examination, 9,300 who passed examinations for their B. A. or B. Sc., and 1,426 who passed examinations for their M. A. or M. Sc., a total of over 50,000 of whom over 10,000 were graduates, and the number of graduates turned out annually in India from 1921 onwards has not been less than 7,000 and has at least twice been over 10,000, making over 55,000 graduates alone between 1921 and 1930, apart from those who have failed to graduate; in comparison with this the 15,000 odd returned as unemployed, most of whom were only matriculates, can hardly be regarded as affording a satisfactory explanation of the outcry there is about the lack of employment for the educated or the vast number of applications that are received for any vacancy for which some educational qualification is necessary.

Educated Unemployed (*i*) By Class.

Serial No.	Class.	Total unemployed.	Aged 20—24. Unemployed for less than one year.	Aged 20—24. Unemployed for one year or more.	Aged 25—29. Unemployed for less than one year.	Aged 25—29. Unemployed for one year or more.	Aged 30—34. Unemployed for less than one year.	Aged 30—34. Unemployed for one year or more.	Aged 35—39. Unemployed for less than one year.	Aged 35—39. Unemployed for one year or more.
1.	Brahmans	4,245	668	1,938	168	903	47	341	14	166
2.	Depressed Hindus ..	303	21	117	12	99	11	39	3	10
3.	Other Hindus ..	6,860	1,001	3,082	278	1,597	77	585	23	217
4.	Muslims	2,580	318	1,081	107	683	30	265	14	82
5.	Anglo-Indians ..	80	13	28	7	9	4	9	2	8
6.	Burmans	37	12	11	2	4	..	2	3	3
7.	All Other Classes* ..	1,204	195	540	79	258	7	90	9	26
	Total Unemployed ..	15,309	2,228	6,797	653	3,544	176	1,331	68	512

* Includes 51 Indians (class unspecified) in Burma.

Total English-knowing Unemployed under 20 years	2,666
Ditto ditto over 40 years	488
Total number of Educated Unemployed whose fathers were Soldiers	82
Ditto ditto ditto Cultivators	6,428
Ditto ditto ditto Artizans	340
Ditto ditto ditto Menials or servants	983
Total number of Educated Unemployed passed Matric. or S. L. C. who though not totally unemployed failed to obtain employment with which they were satisfied	3,123

Educated Unemployed (*ii*) By Degree.

Degrees.	Total Unemployed.	Aged 20—24.	Aged 25—29.	Aged 30—34.	Aged 35—39.
1	2	3	4	5	6
1. British Degrees..	30	4	9	11	6
2. Continental Degrees	3	..	2	..	1
3. American Degrees	8	2	1	..	5
4. Other Foreign Degrees	5	..	1	1	3
5. Indian Degrees—					
Medical	154	20	68	53	13
Legal	149	14	59	52	24
Agricultural	21	15	4	2	..
Commerce	111	55	42	8	6
M. A.	113	31	44	28	10
M. Sc.	41	10	18	9	4
B. A.	1,370	708	474	133	55
B. Sc.	169	76	72	19	2
B. Eng. or L. C. E.	42	13	20	7	2
B. T. or L. T.	35	10	22	3	..
Intermediate	284	145	80	37	22
School L. C. or Matric	11,317	7,150	2,902	951	314
Non-qualified	1,457*	772	379	193	113
Total Unemployed ..	15,309	9,025	4,197	1,507	580

* From Bombay, the United Provinces, Baroda and the Western India States.

The reasons given for the failure of the return were various. In Burma the educated but unemployed are largely Indians and mostly to be found in Rangoon. The reason given for their failure to make the return was that they feared use would be made of it to repatriate to India those who were without employment. In Bengal the reason alleged was a fear on the part of the unemployed *bhadralok* that all that was wanted was a list of them for the police as political suspects, while another rumour accused the Government of trying to win over the unemployed from the congress party by false hopes of employment. In Madras the attitude of the recipient of the unemployment schedule was described as "You will not give me employment, why should I fill up your schedule?" and it seems likely that this feeling, together with a dislike of admitting failure to have found employment and general apathy towards the census is to be taken as the most common cause of the schedule's failure. This failure is not only indicative of the uselessness of expecting to obtain a voluntary return of information failure to comply with which involves no penalty, but a warning against attempts to collect special information on separate schedules returned by the individual as distinct from information collected by an enumerator who retains the schedule himself throughout the proceedings.

In connection with educated unemployment and in explanation of what he aptly labels the *cacoethes matriculandi* the Census Superintendent for Assam quotes the following passage from a note written by Mr. Cunningham (many years Director of Public Instruction in Assam) for the Calcutta University Commission in 1917, and it is still true to-day :—

> "There is a constant conflict in educational policy between the Government and people—the one desiring to improve the standard of education, the other crying on behalf of the hungry who are not fed, for the relaxation of standards and the wider spread of education, good or bad..... The privileged classes do not take to commerce or industry, the unprivileged follow the lead of the privileged. It has been said that in these parts the social order is a despotism of caste tempered by matriculation. It is only by matriculating and taking the part in the after-life which has been reserved for those who have matriculated that the lower castes can raise themselves to consideration. It is only so that they can raise a representation strong enough to fight for their social and political interests; and it is only by education that the privileged classes can qualify themselves to oppose effectively the conservatism of Government. On both hands this literary education is what every man desires. And if new ways are opened which lead to profit, the best amongst the lower classes will still press forward, undiverted, to the university unless the new employment is socially esteemed, and certificated by the fact that the *bhadralog* compete for it."

The Census Superintendent himself sums up the position as follows :—

> "Matriculation has in fact assumed much the same importance in the social sphere as a public school education has done in England. The ambition to 'make a gentleman' of their son is not confined to the parents of the lower classes of any one country and in Assam this takes the form of matriculation and a job which does not involve manual labour. The respectability of a community in Assam, can, in fact, be generally measured by the number of persons belonging to that community who are in Government service."

SUBSIDIARY TABLE I.

Literacy by Age, Sex and Religion.

Religion.	Number per mille who are literate.											Number per mille aged 5 and over who are illiterate.			Number per 10,000 aged 5 and over who are literate in English.		
	All ages 5 and over.			5—10.		10—15.		15—20.		20 and over.							
	Persons.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Persons.	Males.	Females.	Persons.	Males.	Females.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
All Religions (India)	95	156	29	59	20	109	34	195	44	185	28	905	844	971	123	212	28
All Religions (Burma).	368	560	165	227	103	385	161	618	210	662	171	632	440	835	128	202	50
All Religions (India proper).	83	138	23	52	16	98	28	176	36	165	21	917	862	977	123	212	27
Hindu ..	84	144	21	55	15	104	26	184	34	168	19	916	856	979	113	204	16
Sikh	91	138	29	39	16	88	30	179	50	159	29	909	862	971	151	251	21
Jain	353	582	106	250	88	433	144	682	174	670	90	647	418	894	306	571	20
Buddhist ..	90	153	23	37	13	69	18	149	29	203	26	910	847	977	119	207	26
Zoroastrian ..	791	845	734	463	430	661	632	871	824	925	780	209	155	266	5,041	6,396	3,592
Muslim ..	64	107	15	38	11	71	18	134	23	131	14	936	893	985	92	164	11
Christian ..	279	352	203	159	128	278	220	454	296	402	200	721	648	797	919	1,174	649
Jew	416	488	338	230	212	311	300	498	397	583	368	584	512	662	2,636	3,492	1,710
Tribal	7	13	2	5	1	9	2	18	2	15	1	993	987	998	4	7	..
Others	19	30	5	10	3	21	4	43	8	36	5	981	970	995	28	47	6

Details against individual religions refer to India proper excluding Burma.

SUBSIDIARY TABLE II.

Literacy by Age, Sex and Locality.

Province, State or Agency.	Number per mille who are literate.										
	All ages 5 and over.			5—10.		10—15.		15—20.		20 and over.	
	Persons.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.
1	2	3	4	5	6	7	8	9	10	11	12
INDIA	95	156	29	59	20	109	34	195	44	185	28
Provinces	99	163	29	61	20	112	33	203	43	194	29
1. Ajmer-Merwara	125	203	35	83	26	140	41	232	48	240	33
2. Andamans and Nicobars ..	170	223	46	30	18	128	53	187	69	253	47
3. Assam	93	156	22	65	19	116	30	193	33	183	19
4. Baluchistan (Districts and administered Territories).	336	397	156	188	111	301	171	453	162	412	162
5. Bengal	111	182	33	74	24	128	37	220	42	217	32
6. Bihar and Orissa	53	98	8	37	6	66	9	122	12	119	8
7. Bombay Presidency (including Aden).	108	176	31	67	21	127	37	232	49	204	30
Aden	182	258	46	40	24	155	49	229	59	302	47
8. Burma	368	560	165	227	103	385	161	618	210	662	171
9. Central Provinces and Berar	66	120	12	49	10	90	15	164	19	138	10
10. Coorg	176	246	87	108	56	178	94	274	137	279	82
11. Delhi	163	226	72	79	44	145	71	254	90	264	75
12. Madras	108	188	30	64	20	121	36	236	51	227	28
13. North-West Frontier Province (Districts and Administered territories).	49	80	12	22	8	44	13	114	20	98	12
14. Punjab	63	100	17	30	9	69	18	141	29	118	17
15. United Provinces of Agra and Oudh.	55	94	11	37	7	71	13	120	18	108	11
States and Agencies ..	82	130	29	50	21	100	37	171	48	151	25
16. Assam States	61	98	25	30	13	65	27	129	42	119	24
17. Baluchistan States ..	182	228	52	75	36	148	63	195	53	253	55
18. Baroda State	209	331	79	157	75	301	132	470	147	354	55
19. Bengal States	61	104	11	30	7	59	13	138	16	127	10
20. Bihar and Orissa States ..	39	73	5	28	4	49	6	86	7	91	5
21. Bombay States	71	123	15	48	11	92	19	172	27	144	14
22. Central India Agency ..	52	92	9	35	7	61	10	112	14	111	9
23. Central Provinces States ..	23	42	3	10	2	24	3	62	5	52	3
24. Cochin State	337	460	220	264	191	439	303	575	321	498	187
25. Gwalior State	47	78	11	31	7	54	10	90	14	94	11
26. Hyderabad State	50	85	12	39	9	71	13	137	20	90	11
27. Jammu and Kashmir State ..	40	70	6	18	5	38	8	89	10	87	6
28. Madras States (excluding Cochin and Travancore).	121	230	21	35	9	170	30	245	39	290	19
29. Mysore State	106	174	33	41	17	153	46	205	55	208	30
30. North-West Frontier Province (Agencies and Tribal Areas).	374	383	72	144	37	224	65	368	103	392	79
31. Punjab States	42	74	6	17	3	39	5	85	9	90	6
32. Punjab States Agency ..	42	70	7	14	3	32	7	81	11	90	7
33. Rajputana Agency ..	43	76	6	23	3	43	5	86	8	96	6
34. Sikkim State	35	66	3	7	1	16	2	59	3	96	4
35. Travancore State ..	289	408	168	166	113	314	200	530	274	475	153
36. United Provinces States ..	49	90	4	36	3	66	5	104	6	106	4
37. Western India States Agency	125	204	43	98	31	166	53	252	66	236	39

SUBSIDIARY TABLE III.

Literacy by Religion, Sex and Locality.

Province, State, or Agency.	Number per mille who are literate.									
	Hindu.		Jain.		Muslims.		Christian.		Tribal.	
	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.
1	2	3	4	5	6	7	8	9	10	11
India	144	21	582	106	107	15	352	203	13	2
Ajmer-Merwara	164	23	799	82	196	28	848	773	5	..
Andaman and Nicobar Islands ..	261	64	..	..	194	42	472	299	1	..
Assam (inclusive of States)	186	25	716	54	115	16	277	144	31	4
Baluchistan	516	146	778	111	44	3	786	644	..	..
Bengal	263	50	644	203	116	17	487	389	14	4
Bihar and Orissa	102	7	601*	164*	100*	11*	158*	82*	13	1
Bombay including Aden	178	26	540	108	121	16	455	286	10	..
Burma†	338	109	..	..	372	60	..	..	..	..
Central Provinces and Berar	118	9	625*	100*	265	35	626	502	12	1
Coorg	246	88	600	324	203	31	432	215	..	..
Delhi	208	60	588	154	213	55	542	436	..	..
Madras	182	26	612	98	229	21	278	147	6	..
North-West Frontier Province (Districts and Administered Territories).	416	101	..	..	42	3	786	544	..	..
Punjab	166	26	502	87	58	8	121	74	..	..
United Provinces of Agra and Oudh ..	91	9	590	128	97	16	327	241	..	..
Baluchistan States	400	8	..	..	10	..	750	500	..	..
Baroda State	315	72	849	298	420	79	506	263	37	4
Bengal States	119	13	766	85	74	6	218	44	..	..
Bihar and Orissa States	78	5	..	..	..	..	..	..	5	..
Bombay States	114	13	383	68	138	16	301	150	5	..
Central Indian Agency	83	7	637	100	198	8	672	530	2	..
Central Provinces States	50	3	..	..	272	32	65	26	3	..
Cochin State	428	169	716	177	276	49	580	388	..	..
Gwalior State	69	9	398	64	156	28	645	687	..	..
Hyderabad State	70	8	319	66	205	35	221	115	10	2
Jammu and Kashmir State	187	19	802	386	34	2	294	305	16	..
Madras States (excluding Cochin and Travancore).	221	21	579	125	336	15	280	23	..	..
Mysore State	161	24	442	77	284	101	488	341	22	1
North-West Frontier Province (Agencies and Tribal areas).	430	91	..	..	177	36	947	171	..	..
Punjab States	74	5	658	67	56	5	622	636	..	..
Punjab States Agency	98	8	443	38	34	4	212	178	..	..
Rajputana Agency	62	4	607	32	71	7	649	563	..	..
Sikkim State	73	4	1,000	..	813	..	617	322	55	..
Travancore State	399	142	611	..	253	30	460	251	38	2
United Provinces States	100	4	388	105	55	5	38	20	..	..
Western India States Agency	168	35	670	196	253	23	766	706	37	27

* Includes States.

† Otherwise compiled by Races :—

	Other Indians.	Burmese.	Other Indigenous Races.	Indo-Burman Races.	Chinese.	Others.
Males	536	717	350	402	454	914
Females	323	210	80	180	171	885

SUBSIDIARY TABLE IV.

Literacy in English by Age, Sex and Locality.

Literate in English per 10,000.

Province, State or Agency.	1931.										1921.		1911.	
	5—10		10—15		15—20		20 and over.		All ages 5 and over.		All ages 5 and over.		All ages 5 and over.	
	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.
INDIA	52	15	129	13	336	47	250	27	212	28	160	18	109	12
Provinces	57	16	136	31	351	47	265	28	224	29	176	19	121	13
Ajmer-Merwara	112	41	260	71	643	96	530	73	447	71	364	56	269	36
Andaman and Nicobar Islands ..	76	46	385	114	889	130	534	135	513	118	315	111	329	170
Assam	38	8	117	18	346	25	272	14	220	15	189	11	111	5
Baluchistan	474	347	928	502	1,378	409	1,438	749	1,338	608	184	25	119	21
Bengal	145	32	306	58	642	68	495	46	427	48	339	23	228	15
Bihar and Orissa	21	4	52	7	143	11	113	7	92	7	78	5	47	3
Bombay	45	22	125	49	424	92	361	60	286	56	230	37	168	25
Burma	66	35	133	62	284	81	233	45	202	50	155	38	104	24
Central Provinces and Berar ..	23	8	61	14	179	21	133	12	111	13	84	9	64	6
Coorg	104	66	266	135	574	218	457	96	405	112	301	65	188	35
Delhi	162	89	405	148	1,111	224	1,088	205	895	183	566	102	..	..
Madras	61	19	154	39	428	65	302	33	257	35	193	23	140	15
North-West Frontier Province ..	30	10	83	14	382	21	333	23	255	20	169	15	98	9
Punjab *including Agency*	30	8	105	17	344	32	219	20	188	19	117	12	92	12
United Provinces of Agra and Oudh ..	27	8	66	13	174	19	128	14	109	13	73	10	55	8
States and Agencies ..	27	9	95	25	264	45	176	21	151	22	97	16	62	9
Baroda States	33	8	169	23	578	42	313	15	281	18	153	10	104	5
Central India Agency	16	5	43	11	151	16	113	10	92	10	68	6	41	3
Cochin State	104	54	383	183	1,118	406	663	137	582	163	353	76	233	36
Gwalior State	17	3	42	5	102	9	99	7	79	6	56	2	..	..
Hyderabad State	31	10	78	16	171	21	118	12	105	13	55	10	39	6
Jammu and Kashmir State	24	3	66	6	209	10	130	6	113	6	68	3	42	1
Mysore State	20	13	187	57	460	87	321	48	271	48	202	33	133	25
Rajputana Agency	16	2	35	3	87	5	66	4	56	4	34	3	24	2
Sikkim State	8	..	19	2	73	4	75	3	56	3	70	3	41	1
Travancore State	52	27	167	76	538	162	371	66	308	72	247	58	152	23
Western India States Agency ..	29	2	120	7	384	15	243	8	205	7	*	*	*	*

*Included against Bombay.

SUBSIDIARY TABLE V.
Literacy by Caste.

Caste.	Number per 1,000 who are literate.				Number per 10,000 literate in English.			
	1931		1921		1931		1921	
	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.
1	2	3	4	5	6	7	8	9
ASSAM.								
Ahom	246	14	167	9	451	7	355	6
Jugi	266	26	156	11	112	2	88	2
Kachari (Tribal)	62	3	17	..	54	..	10	..
BALUCHISTAN.								
Baluch (Biloch)	8	..	8	..	4	..	2	..
Brahui	12	..	9	..	5	..	2	..
Pathan	21	1	13	..	23	1	8	..
BENGAL.								
Baidya	777	476	714	431	5,295	1,402	4,458	613
Brahman	645	216	654	169	2,888	332	2,504	103
Kayastha	571	209	559	154	2,740	354	2,285	123
Barui	284	56	356	38	721	58	716	13
Kamar	250	37	322	24	450	42	413	9
Jogi (Jugi)	240	33	290	14	396	32	288	7
Napit..	198	25	245	16	333	28	308	7
Baishnab	284	37	259	18	417	35	224	7
Kaibartta (Chasi)	324	39	218	11	472	19	241	3
Goala..	165	24	181	12	293	19	227	5
Dhoba	137	19	142	8	150	12	148	3
Namasudra	145	15	142	6	224	9	134	2
Kaibartta (Jalia)	120	22	110	6	133	22	102	3
Jolaha	133	40	81	4	209	65	39	1
Bagdi	34	4	40	2	20	3	30	..
Hari	36	5	36	1	18	4	14	..
Bauri	14	5	11	1	9	..	7	..
Santal	14	4	8	..	7	..	2	..
BIHAR AND ORISSA.								
Kayastha	605	118	591	84	1,813	153	1,592	51
Brahman	356	28	304	19	371	16	260	8
Babhan	233	25	222	20	143	3	120	3
Rajput	217	13	208	9	156	3	182	2
Khandait	197	9	160	7	82	1	56	..
Teli	114	4	93	2	36	1	23	..
Kurmi	93	4	76	2	39	..	20	..
Chasa	95	3	75	2	18	..	14	..
Jolaha	67	8	50	7	40	1	42	4
Gaura	50	2	35	1	13	..	7	1
Goala..	37	2	26	1	17	..	14	..
Dhobi	29	2	20	1	5	..	6	1
Ho	17	1	14	1	13	..	17	1
Pan (Hindu)	23	..	15	..	1	..	2	..
Santal (Hindu)..	12	1	13	..	4	..	4	..
Oraon (Tribal)	14	7	12	1	12	..	4	1
Dosadh	12	1	8	1	4	..	2	..
Munda (Tribal)	11	2	10	1	6	..	3	1
Santal (Tribal)	8	1	7	1	2	..	4	..
Chamar	10	1	8	..	2	..	1	..

SUBSIDIARY TABLE V—*contd.*

Caste.	Number per 1,000 who are literate				Number per 10,000 literate in English.			
	1931		1921		1931		1921	
	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.
1	2	3	4	5	6	7	8	9
BOMBAY.								
Brahman	788	231	652	144	2,507	221	1,612	72
Lohana	470	74	343	77	790	25	443	61
Lingayat	293	20	231	15	136	1	69	1
Maratha	223	28	58	3	148	2	20	1
Agri	98	3	41	3	14	1	9	..
Mahar, Dhed	63	5	23	1	28	1	13	1
Bharwad	25	2	10	1	3	..	2	..
Bhil	10	..	4	..	1	..	..	..
BURMA.								
Arakanese	678	163	552	79	230	37	105	15
Mon Group	457	124	402	101	85	18	30	7
Karen Group	341	144	222	78	101	52	86	41
Taungthu	275	31	158	17	22	6	15	1
Kuki Chin Group	30	..	102	8	13	..	9	4
Palaung-Wa Group	115	2	87	1	3	..	3	..
Kachin	46	13	21	3	10	1	5	..
CENTRAL PROVINCES AND BERAR.								
Baniya	598	74	430	41	462	11	199	6
Brahman	581	122	386	63	1,345	103	812	40
Rajput	209	15	137	11	165	6	156	9
Kalar	180	10	127	6	70	11	59	3
Kurmi	124	4	82	3	27	..	19	..
Kunbi	144	5	78	2	51	2	24	1
Mali	92	3	66	3	36	..	28	..
Lodhi	86	3	61	3	12	..	22	..
Teli	103	3	59	4	22	..	18	1
Lohar	147	4	55	6	24	1	24	7
Dhobi	62	3	39	4	13	..	15	..
Ahir	33	2	31	4	12	..	26	3
Mehra	56	3	27	1	22	...	6	..
Dhimar	33	2	23	3	10	2	9	..
Gond	17	1	10	1	3	..	2	..
Chamar	16	1	8	1	3	..	3	..
MADRAS. (Including Cochin and Travancore.)								
Brahman	800	286	608	152	3,271	183	1,895	83
Nayar	604	276	491	215	694	137	433	49
Komati	615	68	521	54	354	13	288	9
Chetti	447	97	387	25	348	15	235	5
Vaniyan	152	8	298	21	78	..	109	6
Kammalan	462	95	277	26	73	8	69	3
Labbai	438	27	300	15	240	6	92	4
Kaikolan	186	10	261	18	172	6	79	2
Kshatriya	764	625	244	38	3,329	723	263	17
Kallan	235	8	163	5	98	3	38	1
Telaga	149	25	119	17	220	8	182	6
Mappilla	265	45	117	8	96	4	19	..

Caste.	Number per 1,000 who are literate.				Number per 10,000 literate in English.			
	1931		1921		1931		1921	
	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.
1	2	3	4	5	6	7	8	9
MADRAS.								
(Including Cochin and Travancore)—*contd.*								
Idaiyan	472	264	112	9	1,288	135	90	4
Pallan	56	1	46	2	10	..	7	..
Paraiyan	56	6	37	3	25	3	16	1
Golla	45	3	29	3	40	1	26	1
Mala	16	1	16	1	7	..	7	
Madiga	9	1	9	1	4	..	5	
Cheruman	13	3	8	1	..	..	1	..
NORTH-WEST FRONTIER PROVINCE.								
Awan	67	10	28	2	167	29	43	..
Pathan	48	6	23	1	120	14	30	..
PUNJAB.								
Khatri	438	114	377	61	1,277	85	1,006	39
Baniya (Agarwal)	490	34	386	20	468	17	324	10
Arora..	364	64	294	30	435	29	255	10
Brahman	268	34	214	19	453	20	342	8
Saiyid	216	33	172	26	483	26	341	11
Sheikh	198	43	141	24	545	43	351	11
Pathan	140	26	100	13	356	21	226	7
Kashmiri	140	32	64	11	409	33	167	7
Rajput	89	11	58	6	169	9	85	6
Tarkhan	70	9	38	5	95	3	30	1
Jat	55	7	32	3	76	3	36	1
Kanet	49	1	36	1	29	..	24	..
Awan..	60	6	36	1	96	3	43	..
Arain	56	8	28	3	112	9	52	1
Nai	48	4	28	2	50	1	24	1
Mirasi	41	3	28	1	28	1	17	1
Lohar	51	5	26	2	55	3	36	1
Ahir	30	2	22	1	49	1	27	1
Jhinwar (Jhiwar)	42	4	22	2	39	2	22	..
Julaha	32	3	20	1	28	1	10	..
Biloch	24	2	16	1	23	1	12	..
Teli	24	2	13	1	24	1	9	..
Mochi	20	2	10	1	16	..	4	..
Kumhar	21	2	9	1	21	1	7	..
Chamar	14	1	9	..	7	..	2	..
Machhi	17	2	7	1	19	1	5	..
Chuhra	13	3	4	..	14	4	4	..
UNITED PROVINCES OF AGRA AND OUDH.								
Kayastha	702	191	523	90	1,964	215	1,122	50
Saiyid	380	87	210	38	895	36	227	13
Brahman	293	25	191	13	244	19	122	8
Rajput	183	14	114	12	118	4	57	5
Jat	81	8	51	2	71	4	38	1
Julaha	54	5	30	3	24	1	9	..
Barhai	44	4	27	2	19	2	15	7
Kurmi	54	1	30	1	17	..	10	..

SUBSIDIARY TABLE V—*concld.*

Caste.	Number per 1,000 who are literate.				Number per 10,000 literate in English.			
	1931		1921		1931		1921	
	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.
1	2	3	4	5	6	7	8	9
UNITED PROVINCES OF AGRA AND OUDH—*cond.*								
Teli	43	2	22	1	10	..	5	..
Lohar	46	2	20	1	22	..	6	..
Gujar..	31	2	19	1	13	..	4	..
Nai	39	2	17	2	16	..	6	1
Lodha	24	1	13	1	4	..	2	1
Ahir	20	1	12	..	8	..	4	..
Dom	10	..	12	..	2	..	3	..
Kahar	18	1	17	1	8	1	6	..
Mallah	22	..	10	..	5	..	2	..
Gadariya	11	1	6	..	5	2	14	..
Kumhar	11	1	6	..	6	1	4	..
Bhangi	10	1	5	..	6	2	3	..
Dhobi	7	1	3	..	2	2	2	..
Bhar	8	..	4	..	1	..	2	..
Pasi	4	..	3	..	2	..	1	..
Chamar	6	..	2	..	2	..	1	..
BARODA.								
Brahman	780	284	600	158	1,838	89	909	32
Kunbi	478	97	267	38	256	4	97	1
CENTRAL INDIA.								
Baniya	501	34	323	15	317	10	110	1
Brahman	265	27	123	5	317	19	38	2
Rajput	166	21	75	13	109	5	38	3
Gujar..	50	1	25	2	10	..	3	..
Bhil	5	..	7	..	..	..	..	..
Gond	6	..	6	..	..	..	1	..
GWALIOR.								
Baniya	263	61	352	27	234	12	165	4
Brahman	197	48	182	27	338	17	233	10
Rajput	126	10	77	16	55	2	48	1
HYDERABAD.								
Brahman	701	79	437	63	708	67	338	36
Komati	258	17	270	10	78	14	36	2
Lingayat	88	8	76	3	60	4	26	1
Kapu	64	8	47	2	50	7	12	..
Telaga	42	4	26	3	76	3	36	1
Maratha	30	4	23	2	24	2	9	..
Madiga	10	1	2	1	7	1	1	..
MYSORE.								
Brahman	783	344	707	203	3,386	345	2,399	112
Sheikh	302	102	206	50	350	34	187	7
Lingayat	301	22	203	11	140	5	63	1
Vakkaliga	122	5	75	3	53	3	25	1
Kuruba	68	3	40	1	34	..	13	..
Beda	58	4	36	3	21	1	8	..
RAJPUTANA.								
Baniya (Mahajan)	592	23	442	17	189	5	103	1
Brahman	237	14	169	10	274	4	81	3
Rajput	70	11	52	9	95	2	32	2
Jat	12	1	10	..	15	..	3	..
Gujar..	8	..	7	..	3	..	2	..
Mina	10	..	6	..	1	..	..	..
Meo	5	..	5	..	..	..	1	..
Kumhar	11	..	5	1	8	..	2	..

SUBSIDIARY TABLE VI.

Progress of literacy since 1901.

Number literate per mille

Province, State or Agency.	All ages 10 and over. Males. 1931.	1921.	1911.	1901.	Females. 1931.	1921.	1911.	1901.	15—20. Males. 1931.	1921.	1911.	1901.	Females. 1931.	1921.	1911.	1901.	20 and over. Males. 1931.	1921.	1911.	1901.	Females. 1931.	1921.	1911.	1901.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
INDIA	174	161	140	129	31	23	13	9	195	174	144	132	44	36	21	14	185	171	150	139	28	20	12	8
Provinces	178	167	147	134	30	22	14	9	199	179	151	138	42	35	22	14	190	178	157	145	27	19	12	8
Ajmer-Merwara	223	210	163	142	37	28	17	10	232	211	160	119	48	44	37	13	240	227	171	157	33	26	14	9
Andaman and Nicobar Islands	240	246	224	311	51	38	36	109	187	153	176	512	69	32	37	169	253	260	228	304	47	39	36	90
Assam	169	144	117	89	23	15	8	6	189	164	126	92	33	23	12	8	179	150	121	94	20	13	7	5
Baluchistan	409	76	56	..	162	6	4	..	450	301	287	..	160	217	164	..	410	346	376	..	161	166	152	..
Bengal	201	210	187	138	34	23	15	7	219	214	189	175	41	28	19	13	215	225	199	175	32	21	13	9
Bihar and Orissa	108	114	104		8	7	5		118	111	103		11	10	7		116	126	114		7	7	4	
Bombay	186	181	158	148	30	30	17	11	222	217	171	168	46	53	28	19	195	184	163	153	27	24	15	9
Burma	614	576	496	498	175	123	79	57	618	569	479	485	210	156	109	77	662	620	544	537	171	118	75	53
Central Provinces and Berar	122	103	87	79	11	10	4	3	152	142	109	91	17	18	8	4	127	104	87	83	9	9	3	2
Coorg	264	238	194	159	92	64	36	20	274	226	167	162	137	121	57	37	279	256	214	173	82	52	31	16
Delhi	246	201	*	*	77	44	*	*	254	190	*	*	90	55	*	*	264	217	*	*	75	42	*	*
Madras	211	199	183	160	32	26	17	12	236	204	184	166	51	44	29	22	227	214	198	175	28	22	14	10
North-West Frontier Province	104	95	81	88	13	12	8	7	131	114	82	76	20	20	12	9	113	102	91	101	12	11	8	7
Punjab	112	90	84	86	18	11	8	4	140	96	78	82	29	17	12	6	118	94	95	95	16	9	7	4
United Provinces of Agra and Oudh	104	85	78	75	12	8	6	3	120	92	83	77	17	12	9	4	108	89	82	81	11	7	6	3
States and Agencies	154	127	107	100	35	29	12	8	181	144	106	104	55	47	20	12	160	132	115	108	30	24	10	7
Baroda State	361	277	229	199	80	52	25	9	470	354	258	206	147	105	40	13	354	265	216	208	55	34	15	7
Central India Agency	103	76	64	68	10	7	3	4	112	78	61	76	14	11	5	8	111	81	69	72	9	6	3	3
Cochin State	497	365	329	302	225	127	79	59	575	359	303	282	321	174	104	77	498	397	367	343	187	113	73	56
Gwalior State	87	77	†	†	12	8	†	†	90	78	†	†	14	11	†	†	94	83	†	†	11	7	†	†
Hyderabad State	93	65	67	70	12	9	5	4	137	86	69	77	20	14	7	6	90	67	72	75	11	8	4	4
Jammu and Kashmir State	79	54	53	52	7	3	2	1	89	53	42	45	10	4	2	1	87	61	62	60	6	3	2	1
Mysore State	198	163	142	..	36	24	15	..	205	174	137	144	55	43	24	18	208	169	152	129	30	19	13	8
*Punjab States Agency	79	*	*	*	7	*	*	*	81	*	*	*	11	*	*	*	90	*	*	*	7	*	*	*
Rajputana Agency	86	81	79	75	6	5	3	2	86	80	70	76	8	7	4	3	96	90	88	83	6	5	3	2
Sikkim State	77	101	108	125	4	4	4	3	59	70	73	85	3	5	3	3	96	127	132	155	4	4	4	3
Travancore State	454	425	329	283	178	178	64	39	530	437	318	264	274	226	97	58	475	440	369	320	153	160	56	35
Western India States Agency	225	§	§	§	45	§	§	§	252	§	§	§	66	§	§	§	236	§	§	§	39	§	§	§

NOTE.—The figures for provinces are inclusive of the States attached to them, except in the case of Madras, where they exclude Cochin and Travancore for which separate details have been given.

* Included against Punjab. † Included against Central India. § Included against Bombay.

SUBSIDIARY TABLE VII.

Number of Institutions and pupils according to the returns of the Education Department since 1901.

Class of Institution.	Number of Institutions.				Scholars.			
	1931.	1921.	1911.	1901.*	1931.	1921.	1911.	1901.
1	2	3	4	5	6	7	8	9
Universities and Colleges	333	233	193	186	92,028	59,595	31,447	20,447
Secondary Schools	13,581	8,816	6,442	5,416	2,286,411	1,239,524	890,061	582,551
Primary Schools	204,384	158,792	118,413	97,116	9,362,748	6,310,451	4,575,465	3,150,678
Special Schools	8,891	3,946	5,783	956	315,650	132,706	164,544	33,950
Unrecognized Institutions	34,879	33,929	39,491	43,292	632,249	639,125	630,438	617,818
Total ..	262,068	206,016	179,322	146,966	12,689,086	8,381,401	6,281,955	4,405,988

CHAPTER X.

Language.

Section i.—The Returns.

Extension of the language return.

147. For the return of language in the 1931 census two columns were provided—one for the speakers of mother-tongue, and the other for any language or languages habitually spoken, in addition to the mother-tongue, in daily or domestic life. Infants and deaf and dumb persons were to be credited with the same language as their mothers. The distribution and classification of Indian languages has been so exhaustively dealt with in the Linguistic Survey of India, the very important introductory volume to which appeared as recently as 1927, that little remains for a census to do with regard to the main languages of the country beyond recording their corresponding increase and decrease, since the area of any given tongue is hardly ever stable. In one respect, however, existing information was lacking and that was the extent of the overlap of different languages in the numberless areas in which two or more co-exist. It is not suggested that this overlap is a permanent feature, and that areas speaking two languages at present will necessarily continue to do so in perpetuity, but in view of the not unreasonable desire of many Indians for a redistribution of provinces on a linguistic basis, as well as of the possibility of extensions of franchise to very considerable populations speaking some tribal language as their mother-tongue, to say nothing of the desirability of starting all primary education in the real language of the child to be taught, the record of this overlap has more than a purely academic interest. Moreover, apart from linguistics, the extent of the survival of tribal languages is a better index than that of the survival of tribal religion to the social cohesion of the tribe, since the test of language is easier and more definite than that of religion where the borderland of Hinduism is often vague and obscure. As a matter of fact the material collected of the distribution of mother-tongue and subsidiary languages in *Orissa irredenta* and the coasts thereof was requisitioned by the Orissa Boundary Committee before it had been extracted from the schedules, and it was only by working himself and his staff to the verge of collapse that the Superindendent of Census Operations in Madras was able to provide adequate data in time for the Committee to use it.

Subsidiary language and Orissa boundaries.

148. In the case of Orissa unfortunately the very facts which the census schedule was designed to elicit operated towards impairing its value. This was on account of the stupid and unintelligent propaganda which was deliberately directed to misrepresent as Oriya what was not Oriya, or as non-Oriya what was. The result of this propaganda was the sort of foolishness which made both enumerated and enumerator 'plump' for one language. If a man spoke Oriya as an alternative language with, say, Bengali as his mother-tongue he would return his mother-tongue as Bengali and perversely return Bengali again in the subsidiary column for fear of giving support to the Oriya case. *Vice versa* Oriya speakers equally at home in Telugu would conceal the fact by returning Oriya in both columns. Of the various agitators the Oriyas were easily the worst. So high did feeling run in the Orissa boundaries of Madras that special officers had to be appointed to superintend enumeration and abstraction. Nevertheless the return of subsidiary language, incomplete as it was, made it possible to indicate clearly enough the debatable areas where two languages were spoken and must have been of very considerable value to the Boundary Committee. The general percentage increase in Oriya-speakers since 1921 is in close relation to the average increase in population, and the consistency of the language returns in Ganjam as compared with those of previous censuses, excepting always that of 1901, indicates their general accuracy. The marginal table gives the figures from 1881 onwards taking in 1931 the total speakers of Oriya by mother-tongue only. If those speaking Oriya as a subsidiary language be added, it makes a total number of persons having a command of the Oriya language of 1,184,909—that is of no more than 57·7 per cent. of the

Census of	Total population of Ganjam Plains.	Number returned as speaking Oriya.	Percentage of Oriya-speakers.
1881 ..	1,503,301	748,904	50
1891 ..	1,590,208	797,132	53
1901 ..	1,689,754	1,274,975	75
1911 ..	1,870,826	958,661	51
1921 ..	1,835,562	931,790	51
1931 ..	2,053,381	1,079,337	53

population of the Ganjam plains, to which the figures relate, as compared to the 52·6 per cent. whose mother-tongue it is, but it is probable that there has been some understatement both of Oriya and of Telugu in the return of subsidiary language, as Oriya-Telugu bilingualism is extensive. The inaccuracy of the 1901 figure was recognised at the time, and actually during the course of compilation a reference was made to the Census Superintendent as to the return of Reddikis, a Telugu caste, as Oriya speakers. The compilation was however continued in accordance with the return in the schedule. The Madras Government had a special enquiry made in 1904 as to the language returns of 1901 and reported that the inaccuracy of the census figures in that year was due to the desire of Telugus to participate in the special advantages given to encourage the education of Oriyas; to the belief that it was easier for Oriyas to obtain Government service than for Telugus; and to the fact that there were more Oriya enumerators than Telugu, that they would ask their questions in Oriya, and would probably put down as Oriya speaking all who answered in that language. Ganjam is predominantly bilingual and the return of subsidiary language was first introduced in 1931. So deep does bilingualism go in parts of Ganjam that from very infancy many grow up speaking both Oriya and Telugu and are so much at home in both that they cannot tell which to return as their mother-tongue. Some officers unfamiliar with this phenomenon found difficulty in appreciating the fact that small children can be bilingual, and rejected returns of a subsidiary language under the age at which they considered it possible for a child to have learned a second one thoroughly, but in point of fact it is perfectly possible for a child to be bilingual from his first learning to speak, and the phenomenon is familiar in some parts of India where marriages between persons of different linguistic groups are common. The late Khan of Kalat spoke Brahui to his mother and Balochi to his father from infancy, and children lisping in two radically different tongues are common enough in the hills of Assam.

149. Elsewhere than in and about Orissa the subsidiary language return was fortunately not coloured by immediate politics, though not always free from political bias, as in the case of Bhopal State, where Urdu was returned "in deliberate disregard of the actual facts" in order to give effect to a sentiment that Hindus as well as Muslims living in that State ought to have the peculiarly Muslim variety of Hindustani as their mother-tongue instead of Rajasthani and even instead of Gondi. A similar sentiment caused Muslims in many parts of India to return Urdu (Hindustani) as their mother-tongue and the local vernacular as their subsidiary language though the precise opposite was the real fact; and the same sort of feeling was at work in the case of some Gonds who, considering Gondi of inferior social reputation, returned Halbi, a Marathi dialect, as their mother-tongue, giving Gondi, if at all, as subsidiary. In fact Mr. Grigson, when Administrator in Bastar State in 1930, stated that it was common for Gonds to affirm in court that they knew no language but Halbi, when as a matter of fact their wives and mothers coming to give evidence would be found to understand no tongue but Gondi, on which husbands and sons would admit that they did speak Gondi in their homes. The first stage in the disappearance of any language is the use of another as well in ordinary daily intercourse, and in cases of this kind it is probable that the provision for the return of a second language has extended the area of record of many of the hill and jungle languages now in the process of becoming submerged, a process likely to be much accelerated by the ubiquitous increase of easy communications. It has proved impossible to plot this overlap with precise reference to the numbers involved on a scale small enough to reproduce as an all-India map for this volume. The linguistic map therefore which accompanies this report deals only with the distribution of mother-tongues, and for detailed information as to subsidiary languages the student is referred to the various provincial reports in all of which, except in that for the United Provinces, where Hindustani alone is spoken, will be found a map showing the distribution by population figures not only of mother-tongue but of the actual numbers speaking various subsidiary languages in each district and in some cases in even smaller units. In the provincial volumes (Table XV, ii) will be found the details of subsidiary languages by the smallest territorial units for which it was practicable to give them where such languages were not evenly distributed over a district or larger area. A summary of this information will be found in Table

Bilingualism.

XV (ii), in part ii of this volume and in the corresponding subsidiary table at the end of this chapter.

Changes in classification.

150. A few alterations of minor importance have been made in the classification of languages as compared with that of 1921. India thus appears with 225 instead of 222 languages although the Tibeto-Burman Sub-family is credited with only 128 instead of 134 languages. This reduction of six, increased to seven by the omission of unspecified Pahari, is more than balanced by an addition of one to the Eranian branch—Persian, a dialect of which is the mother-tongue of a number of villages in Baluchistan, having here been added to the vernaculars of India; of one to the Dardic branch, that is of Bashgali in the Kafir group which did not appear at all in 1921; of one to the southern group of the Indo-Aryan branch, Konkani being treated as a separate language and not (as in 1921) as a dialect of Marathi; and of seven to the unclassed languages, Burushaski appearing for the first time, Andamanese being shown as two languages instead of one (since the language of the Jarawas, Sentinelese and Onges differs much from that of the Great Andaman coast tribes), and the unclassed Gipsy tongues appearing as six instead of one, though there has been no change in nomenclature or classification except that they are not pooled as in 1921. In the case however of the Tibeto-Burman languages there are changes in grouping and nomenclature which need to be stated. In the Bodo group the speakers of the language shown in 1921 as "Tipara or Mrung" have been returned partly under the same head and partly under the term *Tsakchip* in the Old Kuki sub-group of the Kuki-Chin group. In the Naga group Khoirao and Marāmi have been merged in Memi (="Sopvoma or Mao" of 1921), and Chang, the cis-frontier speakers of which are very few, in the new term *Other Eastern Naga languages*, which includes also Phom and some trans-frontier languages spoken by casual individuals found inside the frontier at census time. Mikir has been put in a group by itself, as besides having affinities to the Kachha Naga and Kabui languages it has strong affinities to the Bodo tongues and some to the Kuki ones. Maring has also been omitted from the Naga-Kuki sub-group and shown in the Old Kuki sub-group of the Kuki-Chin group, with which it seems to have at least as much affinity as with the Naga. In the Kuki-Chin group there have been changes of nomenclature and amalgamation resulting in the disappearance from the list of Purum, Hiroi-Lamgāng, Chote, Vaiphei, Kamhow, Laiyo, Kwingly, Yokwa, Kaungtso, Kwelshin, Hualngo, Kyaw and Taungtha, and in the addition of Pankhu, Chinbok, Chinme, Rongtu and Tsakchip as well as of Maring transferred from the Naga group. Sokte now includes Kamhow, Thado includes Jangsen, Lai includes Kaungtso, Kwangli, Kwelshin, Tlangtlang, Laiyo and Yokwa, and Tashon includes Hualngo. The Mān and Karen languages probably have affinity with the Mon-Khmer, with which indeed they were actually classified in 1911, but they are also reported to have Tai characteristics and the combination may be due to contact or to the amalgamation of tribes. They have been associated this time for convenience with the Tibeto-Chinese family, as Przyluski treats them as affiliated to the Tai. Information on these and on the other groups of Burma languages is still very scanty as the Linguistic Survey of Burma has never been carried out. Among the foreign languages (C. *Languages of Europe*) is included a number of persons who returned their mother-tongue as "Swiss". This however is not a new international language, but appears to be a relic of war-time mentality and an euphemism accordingly for 'German', to which category they have been added in the detailed table. From somewhat similar motives, perhaps, Flemish seems to have been returned as "Belgian".

Some slight alterations in the classification adopted in provincial and state reports have been made in the India tables. The speakers of Palaung (842) and Pale (114) returned from the Chittagong Hill Tracts, Tripura State and elsewhere in Bengal cannot apparently be correct, as all the Palaungs are located in the Shan States to the east of Burma. I have therefore no doubt whatever that Palaung should have been classified as Palaing, the name of a Kuki-Chin clan in the area from which the returns are made. Pale is more doubtful. It may be the name of another clan—there is certainly one called Palow—or it may be a return of Pali made by Buddhist priests in the spirit that provokes many returns of Sanskrit by learned Hindus or of Arabic by Muslims; in any case it is most unlikely to be the Pale of the Palaung-Wa country.

INDIA
SHEWING
POPULATION BY LINGUISTIC FAMILIES
SCALE OF POPULATION
1 SQUARE INCH = 500000 PERSONS
BALUCHISTAN
UNITED PROVINCES
CENTRAL PROVINCES
BIHAR
ORISSA
BENGAL
HYDERABAD
MYSORE
INDIAN OCEAN
REFERENCE
AUSTRIC LANGUAGES
Mon Khmer Branch 1
Munda Branch 2
Tibeto-Himalayan Branch 3
North Assam Branch 4
Assam-Burmese Branch 5
Unclassed 6
TIBETO-CHINESE LANGUAGES
Tai Branch 7
Karen family 8
Mon family 9
Chinese Languages
DRAVIDIAN LANGUAGES
Dravidy Group 10
Intermediate Group 11
Andhra 12
North Western 13
INDO-EUROPEAN LANGUAGES
Eranian Branch 14
Dardic Branch 15
North Western Group 16
Southern Group 17
Eastern Group 18
Mediate Sub-Branch 19
Central Group 20
Pahari Group 21
UNCLASSED INDIGENOUS LANGUAGES
Indonesian Languages
Gond Language 22
Dravidian 23
OTHERS (Mostly foreign)
PROVINCIAL BOUNDARY
DIVISIONAL BOUNDARY
DISTRICT BOUNDARY
STATE BOUNDARY
1 Nicobar, Pelewng and Wa Languages, Khasi, Nicobarese. 2 Kharwari (Santali, Mundari etc), Korku, Kharia, Juang, Savara, Gadaba and other Munda Languages. 3 Bodia (all dialects), Preconminalized Himalayan Group (Bhotiya, Kanashi, Kiranti etc), Non-preconminalized Himalayan Group (Gurung, Newari, Lepcha etc). 4 Abu, Abor, Dafla, Mishmi. 5 Bodo Group (Garo, Chutiya, Kachari etc), Naga Group, Mikir, Kuki-Chin Group, Kachin Group, Burma Group (Burmese, Arakanese etc), Abor-Moho Group (Lisaw, Lahu etc), Bok Group (Lol, Riddi etc). 6 Mro. 7 Tai Group (Lao, Siamese, Khamti, other Shan Languages). 8 All Karen dialects. 9 Mlao, Yao. 10 Tamil, Malayalam, Kanarese, Kodagu, Tulu, Toda, Kota. 11 Kurukh (Oraon), Malti, Gondi, Koi, Kolami. 12 Telugu. 13 Brahui. 14 Pushtu, Baluchi, Persian. 15 Khowar (Chitrali), Shina, Kashmiri, Kohistani, Bashgali, other Kafir Languages. 16 Lahnda, Sindhi. 17 Marathi, Konkani. 18 Oriya, Bihari, Bengali, Assamese. 19 Eastern Hindi. 20 Western Hindi, Rajasthani, Gujarati, Bhili, Khandeshi, Punjabi. 21 Pahari Languages (Kooa-kara etc). 22 Bodiari, Bhamti, Gulgulia, Kanjari, Kushbandki, Kachari, Nati, Odki, Pendhari, Ganji etc.
PREPARED UNDER THE DIRECTION OF THE CENSUS COMMISSIONER FOR INDIA, 1932.

Language groups.	No. of languages spoken.	No. of speakers as mother-tongue and subsidiary 1931 (bilinguals shown twice).	No. of speakers 1921.	No. of speakers mother-tongue only, 1931	Difference between columns 4 and 5 (increase in 1931+ decrease in 1931—).	Difference between columns 4 and 3 (increase + decrease —).
1	2	3	4	5	6	7
A.—Language of India and Burma.	**225**	**366,430,537**	**315,525,177**	**349,887,527**	**+94,362,350**	**+50,905,360**
(i) *Austric Languages—*						
1. Indonesian languages ..	2	6,542	5,561	6,542	+981	+981
2. Mon-Khmer languages ..	10	734,204	549,917	726,578	+176,661	+184,287
3. Munda languages ..	7	4,710,685	3,973,873	4,609,588	+635,715	+736,812
(ii) *Tibeto-Chinese Languages—*						
1. Tibeto-Burman languages .	128	14,167,611	11,959,011	12,982,840	+1,023,829	+2,208,600
2. Tai-Chinese languages ..	11	1,150,220	926,335	1,027,656	+101,321	+223,885
3. Man and Karen languages*	17	1,351,291	1,114,617	1,342,278	+227,661	+236,674
(iii) *Dravidian Languages—*						
1. Dravida languages ..	7	47,032,874	37,285,594	41,454,593	+4,168,999	+9,747,280
2. Intermediate languages ..	5	3,661,277	3,056,598	3,609,418	+552,820	+604,679
3. Andhra language ..	1	28,195,824	23,601,492	26,373,727	+2,772,235	+4,594,332
4. N. W. language.. ..	1	231,581	184,368	207,049	+22,681	+47,213
(iv) *Indo-European Languages—*						
1. Eranian languages ..	3	2,457,134	1,981,675	2,270,466	+288,791	+475,459
2. Dardic languages ..	5	1,543,031	1,304,319	1,522,936	+218,617	+238,712
3. Indo-Aryan languages ..	19	261,105,909	229,560,555	253,699,403	+24,138,848	+31,545,354
(v) *Unclassed Languages—*						
1. Andamanese	2	466	580	466	—114	—114
2. Burushaski	1	26,076	..	26,076	+26,076	+26,076
3. Gipsy dialects† ..	6	25,999	15,018	25,999	+10,981	+10,981
4. Languages not returned and unspecified.	..	29,813‡	5,664	1,912	—3,752	+24,149
B. Languages of other Asiatic countries and Africa.	**17**	**305,386**	**211,894**	**302,324**	**+90,430**	**+93,492**
C. Languages of Europe ..	**20**	**452,099**	**319,112**	**339,706**	**+20,594**	**+132,987**

* The correct classification of these two langauges is doubtful. Przyluski treats them as Tai (Meillet and Cohen, *Langues du Monde* 380), but it is probable they have Austric affinities.

† These dialects are drawn from various Indian languages and contain such diverse elements that they cannot fairly be allotted to one family rather than another.

‡ Includes Hill and aboriginal subsidiary languages (27,841).

Survival of Tribal Languages.

151. The table above shows in a very general way the linguistic position and the importance therein of the subsidiary language return, but it is really only by reference to the various provincial reports that individual areas can be dealt with. There are far too many languages and dialects in India to treat individually without prolonging this chapter to an inordinate length. The question however of tribal languages and of their survival or displacement is of such interest, at any rate in several provinces, that no justification is required for quoting here at length from the provincial reports to which reference must be made for details. The Census Superintendent for the United Provinces draws attention to the disappearance of gipsy languages :—

"These gypsy languages.....are dying out in this province. These wandering tribes are taking to a more settled manner of living, cultivation and the like, and with this change comes the need to use the language of their neighbours. As a result the majority of the present members of these tribes have never learnt these dialects, but speak from their youth some form or other of Hindustani.....even those who returned a gypsy language as mother-tongue in every case returned Hindustani as subsidiary language."

And the Census Superintendent of Mysore State reports precisely the same phenomenon. Of tribal languages in Central India the Census Superintendent of the Central India Agency writes as follows :—

"Despite the presence of a large Tribal population in Central India, the question of the non-Aryan dialects giving place to the advancing tide of Aryan culture and civilization does not present itself for the very obvious reason that the process of displacement has already taken place, perhaps a long time ago. The Kol, Baiga and other Munda tribes in Rewa, the Sonr in Bundelkhand, the Saharia in northern Malwa and Gwalior, have in the present day no languages of their own. They speak the Indo-Aryan vernacular of the locality in which they reside. Whether the Bhil had a language of his own we do not know. Probably the basis of his language was Munda but his present language is throughly overlaid with an Aryan superstructure.....The Gondi (so-called) of Rewa is practically a broken Bagheli. If that be so, the Aryan language has already supplanted the language of the Gonds. The small number of Korkus who live in the villages in the Narbada valley have practically abandoned their language and speak Malvi."

For the tribes in Baroda the Census Commissioner for that State points out that where the members of a tribe have no economic independence, Hinduization

involves the loss of the tribal language. Thus Gujarati is rapidly supplanting, if it has not supplanted, the Bhili dialects of the Dublas and Talavias, who are agricultural labourers dependent on Gujarati-speaking masters. But on the other hand where there is economic independence with a consequent social consciousness the tribal language survives Hinduization and value is attached to its retention, as for instance by the Chodhras. This helps to explain the obvious vitality of tribal languages in eastern India in spite of the rapid Hinduization of the past decade. This vitality is on the whole pronounced in the Central Provinces, in Bihar and Orissa, in Bengal and in Assam, though there are one or two exceptions in each of these provinces. At the same time bilingualism is on the increase and there can be little doubt of the ultimate fate of these tribal languages. The Census Superintendent for the Central Provinces writes :—

"In border areas poly-linguism is in fact frequently encountered. A well-known, but humble, Gond shikari in south Chanda can speak and understand Hindi, Telugu, Gondi and Marathi, and such cases are by no means exceptional....., wherever a tribal language is spoken, the great majority of the adult men using it, and a large proportion of the adult women, are bi-lingual. So faithfully indeed is this fact accepted that in Seoni district it was found that among the Gonds infants in arms were being recorded as bi-lingual."

Nevertheless of the tribal languages themselves he finds that :—

"Kherwari was the only non-Aryan language for which numbers substantially below those of 1911 were returned. In fact the apparent fall in 1921 of those speaking almost all tribal languages must evidently be attributed to the influenza epidemic, for it can be proved from the figures of the 1931 Census that, although the danger of their displacement is obvious, the actual state of affairs has not really been changing for many years past..... In the first place, except for Korku, the Munda languages have either disappeared or are, it seems, in process of disappearance in this province. Of 84,971 Sawara or Saonrs enumerated not a single one returned the tribal language. There is no doubt that the Sawaras of Chhattisgarh and the territories outside the Central Provinces adjoining it are the same as the isolated tribe known as Saonrs in Saugor and Damoh.....some ethnologists have insisted that Korwas and Korkus are branches of the same tribe. If this is accepted the concentration of the Saonrs in the forests of the Vindhyan foothills, far from the Sawaras of Chhattisgarh, and the Korkus in the Mahadeo hills and the Melghat, far from the Korwas of the Chhota Nagpur plateau irresistibly suggests the withdrawal of those who spoke Munda languages in the first instance into the remote and isolated tracts of the province before the approach of Dravidian and Aryan languages. The Munda elements which remained in the local language in the open tracts merged into mixed jargons. Even in the hills Sawara also disappeared. Of the others Korku, which is still spoken among themselves by the greater number of the members of the tribe, Korwa, Kharia and Gadaba alone survive. Gadaba the mother-tongue of a handful of people in Bastar State numbering not more than 400 was returned by slightly more than that number of people at the Census. Sir George Grierson's remarks regarding Nihali, classed as a dialect of Korku, are relevant in connection with this discussion. Mentioning that there are many instances of tribes which even in historic times have abandoned one language and taken to another he wrote :—

"A striking example is afforded by the tribe of Nahals in the Central Provinces. These people appear to have originally spoken a Munda language akin to Korku. It came under Dravidian influence and has become a mixed form of speech, half Munda and half Dravidian. This in its turn has fallen under the spell of Aryan tongues, and is now in fair way to becoming an Aryan language. If we were to judge by language a hundred years ago we should have called the tribe Munda."

Korku itself was returned as their mother-tongue by 161,975 members of the tribe out of a total population of 176,616, the corresponding figures having been 112,194, and 140,440 in 1921. It is to be observed that of these 54,716 males and 50,974 females speak the language of the tract in which they reside as subsidiary to their mother-tongue. On the other hand the number of persons returning mother-tongue Hindi or Marathi and subsidiary language Korku was negligible.

Apart from the few tribes which still speak Munda or Dravidian languages there are a number speaking either Aryan dialects, distinguished by the names of the tribes themselves or else the language of the tract in which they are found. Whether the original language of these tribes was Munda or Dravidian it is generally impossible to trace. For instance Bhili is now classed as a language of the Aryan sub-family ; while the Kamars, Bhatras, and Halbas all speak dialects of Aryan languages. On the other hand the Baigas, a typical forest people numbering 37,086 in the province, have now really no language of their own. Baigani returned by 3,641 persons almost all in Balaghat, is merely a broken dialect of Chhattisgarhi. Others who have lost their original language, whatever it was, are Bhuinhars, Binjhwars, Kolis, Rautias, Kawars and Pandos. Binjhwari, returned by 2,339 speakers in Raipur and Surguja

is recognized as a sub-dialect of Chhattisgarhi. Bhuihari, spoken by 28 persons in Korea, and Pando, by 502 in Udaipur, have been identified by Rai Bahadur Hiralal to be broken dialects of Chhattisgarhi.

It is interesting to notice that among these tribes which have assimilated Aryan language are some, if not all, of those regarded as the true aboriginals or autochthonoi of the Eastern Central Provinces—for instance the Binjhwars, the Kamars and the Baigas. The Gonds, Halbas and others have been classed as semi-aboriginals, probably outsiders who have been domiciled in the province since before historic times. Binjhwars, Baigas and Kamars have all been described by Russell as "Dravidian tribes". It cannot be said what was the original form of their language but the claim that they are true aboriginals of the province appears to be just as strong as that for the Korkus who according to Russell, being an offshoot of the great Kol or Munda tribe, came much further west than their kinsmen and settled in the Mahadeo hills. According to their own traditions, however they claim to be born of the soil and to have been especially created by Mahadeo as a population for his hills at the request of Rawan, the demon King of Ceylon".

In Bihar and Orissa even the Austroasiatic languages, which have almost disappeared further west, are flourishing, and the Census Superintendent there reports that—

"Since 1921 there has been an increase of about 577,000 or 17·7 per cent., in the number of persons speaking....tribal languages. They have in fact more than kept pace with the general increase in population, with the result that the proportion of the total population accounted for by them has risen from 859 to 907 per 10,000. Two principal reasons may be advanced to explain this ..... The first is that the aboriginal peoples themselves have multiplied more quickly than most other communities—partly because their natural rate of growth is superior, and partly because many emigrants have returned during the last decade from the industrial centres of Bengal and the tea gardens of Assam. The second reason is that the procedure adopted at the present census of recording "mother-tongue" and "subsidiary language" separately, instead of the single language "ordinarily spoken", has undoubtedly led to a more complete return of tribal languages as the mother-tongue of persons who are bi-lingual. To this latter cause must clearly be attributed the fact that in the district of Champaran 5,511 persons are shown as speaking Oraon at the present census, out of whom, 5,508 speak Hindustani as a subsidiary language. In 1921, although there were nearly 10,000 Oraons in that district, not a single one was returned as speaking his tribal tongue. Similarly, in Balasore the number of Santali speakers has gone up abruptly from 9,655 to 15,120, and more than 10,000 of the latter are now shown as speaking a second language (Oriya) .....very few of the tribal languages are falling into disuse. The only ones in which the proportion of speakers is appreciably lower than it was ten years ago are Bhumij, Juang, Kharia, Mahili and Turi. In the case of Mahili the decrease probably has not much significance, for this dialect (like Karmali) is little more than a variant of Santali, and it is probable that Santali was entered fairly often as the mother-tongue o persons speaking Mahili. The decline in Bhumij is most noticeable in the districts of Manbhum and Singhbhum, where the "Hinduization" of this tribe is proceeding apace; in Mayurbhanj state, although Hinduism is now returned as the religion of the great majority, the tribal feeling persists, with the result that the tribal language too is still vigorous in that area. Speakers of Juang have increased in number since 1921 from 10,531 to 14,583..... To all intents and purposes this language is as full of vitality as ever it was. Nor is the loss sustained by the Kharia language material, though the proportion of speakers has fallen off slightly both in Ranchi and in the Orissa states, the two localities where this particular tribe is numerous. Turi, however, is definitely on he wane. In 1911 it was spoken by 2,701 persons, in 1921 by 1,808, and now it is spoken by only 1,215..... But in these days there is little to distinguish Turis from an ordinary low Hindu caste, and the loss of their old tribal language is not a matter for surprise.

The particularly marked increase in the proportion of persons speaking Kora is due primarily to vagaries of classification.....Still more abrupt is the increase from 383 to 6,270 in the number of persons speaking Gondi. This represents a swing back to (and beyond) the position in 1911, when there were 4,212 speakers of this language. The fact is that in this province nearly every Gond has acquired the knowledge of a secondary language, and at the last census the tendency to return this secondary language in preference to the tribal dialect was apparently carried to a much further length with the Gonds than with most of the other aboriginal races.

Taking together.....18 tribes.....the proportion of their members speaking tribal languages is 820 per mille, as compared with 802 per mille in 1921.....In areas where primitive races are most numerous a pleader, a zamindar or a village mahajan may find it absolutely necessary as a matter of business to acquaint himself with their manner of speech. Thus, in the Sadr sub-division of Singhbhum the supremacy of Ho as the *lingua franca* of the countryside is unchallenged. In Ranchi a considerable number of the Aryan inhabitants speak Mundari and (to a less extent) Oraon. Curiously enough, Santali in the Santal Parganas seems

to be treated much more cavalierly, and as a subsidiary language it is spoken just as widely in Manbhum. This can hardly be in accordance with the actual facts, and it is probable that, both in the Santal Parganas and in other parts of the plateau, the returns fail to do justice to the extent to which the use of tribal languages is current among non-aboriginals. Some foolish notion of prestige may have restrained people from admitting that they were in the habit of speaking these dialects.....

The marginal statement shows for each tribal lanaguage the proportion of persons who speak some subsidiary language.....

Tribal language.	No. of speakers.	No. per mille using some subsidiary language.
TOTAL ..	3,837,768	419
Asuri	2,769	842
Bhumij	117,356	746
Birhor	731	557
Birjia	628	998
Ho	526,443	226
Juang	14,583	901
Karmali	10,047	122
Kharia	113,680	871
Kora	9,739	465
Korwa	12,434	950
Mahili	13,704	254
Mundari	521,891	486
Santali	1,628,957	283
Turi	1,215	913
Gondi	6,270	769
Kondhi	133,682	448
Oraon	656,188	723
Malto	67,451	122

It will be noticed that among the smaller tribes, such as the Asurs (including Birjias), the Juangs and the Korwas, the acquisition of a second language has proved to be almost universally necessary. This is only natural, for with such limited numbers they obviously could not maintain themselves in water-tight compartments. It is interesting to find that bi-lingualism is so comparatively rare among the Santals and Hos; also that as between the Oraons and Mundas who for the most part are found in close association, the former tribe is in this matter the more sophisticated of the two. In all, 1,607,250 speakers of these tribal languages are bi-lingual, and this means that three out of every four persons in the province who use a secondary language in every day life belong to one or other of these tribes. One would naturally expect bi-lingualism to be a good deal more common among males than among females, but the returns do not bear out this expectation. So far as the aboriginal races are concerned, the ratio is 82 males to 79 females. It is not improbable that the returns are inaccurate in this respect, and that women were sometimes shown as speaking a second language simply because their husbands did so."

In Bengal the Austroasiatic languages are out of their environment and find survival more difficult, while of Dravidian languages Kurukh indeed has increased a little but Malto has decreased. On the other hand the Tibeto-Burmese languages seem hardy enough on the whole, though some have declined. Of these languages the Census Superintendent of Bengal writes :—

"The total number speaking languages of the Bara group is 246 thousand compared with 226 thousand in 1921..... Tipura spoken by nearly 192,000 persons ..... makes the largest contribution towards this group and those speaking it have increased from 158,734 in 1921 ..... Those speaking Garo, Koch and Kachari have all declined in numbers.. ..... Rabha was not returned as a language in spite of there being over 3,000 members of the tribe returned by the tribal name ..... The total numbers speaking the Kuki-Chin group of languages is rather less than 43 thousand compared with nearly 30 thousand in 1921 ..... It is the persons speaking Tibeto-Himalayan languages who are most extensively bi-lingual in Bengal. In Darjeeling amongst those speaking Bhotia tongues five times as many speak some subsidiary language as the number of those without any subsidiary language at all; and even in Sikkim rather more of those whose mother-tongue is a Bhotia language are bilingual than not ..... Similarly for every three persons in Sikkim speaking Rong as mother tongue with no subsidiary language there are four who speak also some subsidiary language. In the whole of Bengal amongst persons speaking Tibeto-Himalayan languages there are only 11 speaking no subsidiary language to every 89 who are bilingual, and in Sikkim the corresponding proportions are almost one to two. Those speaking Austro-Asiatic languages appear to have the next greatest facility or necessity for acquiring subsidiary languages. Throughout the whole of Bengal in every 100 persons speaking these languages there are 33 who are bilingual to every 67 who are not..... Those speaking Kherwari adopt by preference Bengali as their subsidiary tongue whereas those speaking Kharia more generally use Hindustani."

Similarly in Assam the Census Superintendent is emphatic as to the vitality of tribal languages :—

"We can ..... say definitely that the indigenous hill languages are as vigorous as ever and show no signs of erosion. As regards the tribal languages spoken in the plains ..... Kachari (including Dimasa) and Rabha, both of which showed a decrease in 1921, have a considerable increase in the number of their speakers at this census. ..... To show the vigour of Kachari I need only mention that out of the 57,000 persons in Darrang who have returned their caste as Kachari 51,000 speak the Kachari language and in Kamrup out of 107,000 Kacharis 93,000 still claim Kachari as their mother-tongue. The question of Rabha is difficult because

owing to conversion to Hinduism the actual number of people who returned their tribe or caste as Rabha has been steadily decreasing since 1911. In that year there were 79,000 Rabhas: in 1921 only 70,000 and at this census 69,000, yet the number of speakers of Rabha is practically the same now (27,000) as in 1911 (28,000), and considerably more than in 1921 (22,000).

As for Lalung..... the speakers of this language have declined at every census since 1901 but that I doubt whether the census figures represent the real number of speakers. On the whole I think we are justified in concluding that the tribal languages in the plains are holding their own in a wonderful manner. Even the small Deori community—about 4,000 strong—appear to be in no danger of forgetting Chutiya, their mother-tongue. Mr. McSwiney remarked in 1911 that the Chutiya language was practically defunct though it continued to retain a small spark of life. That spark is still burning and shows no sign of being extinguished.

It will be of intense interest to observe whether the Assamese language itself—against the inroads of which the tribal languages of the plains have, for hundreds of years, put up such a stout fight—will, in its turn, be able in the future, to defend itself against a new and a very powerful invader in the shape of Bengali which, with the coming of the Eastern Bengal settlers, has established itself firmly in all the districts of lower and central Assam."

Of bilingualism in Assam the Census Superintendent concludes that—

"The statistics of bi-lingualism are smaller than might have been expected and..... the only people in Assam who are bilingual to any extent are the speakers of Tibeto-Burmese languages in Goalpara, Kamrup, Darrang, Sibsagar and Nowgong and ..... except in Goalpara, (where two-thirds of the Tibeto-Burmese speakers have Assamese and one-third Bengali as their subsidiary language) the only subsidiary language which they can speak fluently is Assamese."

This, of course, excludes the consideration of Tibeto-Burmese languages *inter se*, as the Census Superintendent, in view of their unconscionable number and variety, has necessarily treated them as a whole for statistical purposes. These languages are however so variable and multiform that each differs totally from its neighbour as a spoken vernacular, and there are cases in the Naga Hills where the mother-tongues of opposite sides of the village street are so different that, although one is always known to both sides, the one in lesser use may be incomprehensible across the road, and it is common to hear two people colloguing while answering each in his own tongue the questions of his *vis-a-vis* asked in the other's. The Census Superintendent for Assam has thus fallen into the very certain error of stating that the Assam hill tribes are not good linguists. It is true that few know Assamese. Little opportunity have they to learn, and less to learn Bengali or Hindustani, but there are small villages where the children grow up fluent in five languages each of which would puzzle a Dutchman to learn a little of in two years, and in the State of Manipur the majority of male tribesmen are bilingual in their own tongues and Manipuri, while a combined knowledge of some Kuki language, some Naga language and the Manipuri language must be extremely frequent. The incredible rapidity with which a Naga or Kuki interpreter acquires an additional language with the most limited opportunity for doing so has to be experienced to be appreciated, and there are some villages which in addition to real languages compose jargons and counter-jargons of their own in order to be able to chatter incomprehensibly in the presence of others, particularly when discussing a proposition of purchase, sale or barter.

Difficulties in classifying Indo-Aryan Languages.

152. The fact that no linguistic map was prepared for the United Provinces as mentioned above is involved in a difficulty not of subsidiary languages but of mother-tongues, a difficulty which was very far from being confined to the United Provinces. This difficulty was that, familiar from former census reports, of distinguishing in the census record between the various dialects of Hindustani classified by Sir George Grierson as different languages. Generally speaking one dialect fades into another by indistinct and gradual changes so that it is very difficult to draw a hard and fast line and say for instance 'here the Eastern group ends and the Mediate begins; here ends Mediate Hindi and beyond is Western'. It was anticipated that this difficulty would be found to operate in the case of all the languages of the Indo-Aryan branch of the Indo-European family, but as a matter of fact this did not prove to be the case with all of them. Rajasthani and Bhili, for instance, gave little difficulty, but the distinction between Eastern and Western Hindi in the Central Provinces and Central India, and between Lahnda and Panjabi in the Punjab was more than the census enumerators could grasp. As for the enumerated, each of course very properly considers his Hindi to be the true Hindi and is not prepared to qualify it by an adjective of locality implying

that it is merely a dialect. Too much precision must not therefore be expected of figures representing the use of Eastern and Western Hindi and of Lahnda and Panjabi, as it was necessary in the course of compilation to assign large numbers of speakers of Hindi, and similarly of Panjabi, more or less arbitrarily to one or the other group according to locality, since the returns were inevitably unqualified. In the United Provinces no attempt was made to distinguish Eastern from Western Hindi and for the purpose of the linguistic maps the line has been taken arbitrarily as the boundary (more or less) of Agra and Oudh provinces, which is probably as nearly correct as any other convenient boundary that could be chosen.

Script. **153.** The United Provinces again proved a stumbling block to a return of script. Some idea of the respective numbers who use each of the various vernacular scripts is unquestionably a desideratum. That such a return is possible has been shown by the Punjab, in which a return was made of the script of literacy and numbers are available of those who use the Urdu, Nagari, and Gurmukhi scripts respectively; similarly by the Central Provinces and Berar, where figures are now available for literacy in Hindi, (or Marathi) and Urdu respectively; by the Central India Agency for which the returns cover the same three scripts and Gujarati; by Hyderabad, and by Jammu and Kashmir State. But in the United Provinces an ancient controversy about the use of the terms Hindi and Urdu for the spoken language apparently gave rise to the fear that a similar controversy would arise as a result of asking for the script of literacy. As there can be no argument as to whether a given script is Urdu or Hindi it is difficult to comprehend the relevancy of this fear and it might have been surmised that the Local Government would have found the return of script useful. In the case of the spoken language admittedlythe use of the terms Urdu and Hindi do give rise to embittered controversy between two schools which are generally speaking conterminous with Hinduism and Islam in religion. In point of practice it is impossible to define any boundary between Urdu and Hindi as spoken, since the difference consists merely in a preference for a Persian or for a Sanskrit vocabulary, and as an illiterate man uses only the language of common speech it is generally the bias of the enumerator which would determine the category of his return. As far as spoken language goes therefore it was decided, as in 1921, to use the term Hindustani only in the return for the United Provinces, and with the omission of the script of literacy the use of the term Urdu disappeared. This disappearance caused some searching of heart among Muslims who did not realise that the reason for omitting the term Urdu was that no general record of the script was being made at the census. For H. E. H. the Nizam's Dominions a return of literacy in Urdu has been added to that of English.

Persons literate in

Prov. or State.	Gurmukhi.	Hindi.	Marathi.	Urdu.	Roman.
Baluchistan ..	3,490	7,111	1,083	18,422	3,844
C. P. and Berar ..	..	380,950*	..	44,247	..
Delhi ..	1,821	26,008	..	47,358	175
Punjab	198,484	216,296	..	908,521	6,587
Central India Agency	..	255,981	15,616	29,453	..
Hyderabad ..	..	..	..	192,039	..
Jammu and Kashmir	..	776	..	3,178	..

*Includes Marathi.

Figures not available from other provinces.

The need for a common script for India is probably even greater than that for a common tongue. English is tending to supply in a minor degree the place of the latter, but even Hindustani, the most widely used Indian language appears in totally different characters. Historical sentiment and local patriotism alike militate against the abandonment of any of the numerous scripts in use in India, but it seems probable that sooner or later some common script will have to be adopted, and the Roman script now adopted by Turkey would probably be the most satisfactory compromise in spite of its alien origin and its paucity of symbols. Hindustani in the Roman script is already in use in the Army and proves eminently satisfactory, and owing to the discharge of soldiers accustomed to use it, it must be spreading slowly in all areas in which the Indian Army recruits. The inclusion in the census schedule of a return of script would have provided figures for its diffusion and a basis for subsequent comparisons, but unfortunately the already over-crowded schedule could not be made to carry more, and the only returns of it available are those for the Punjab, where 6,587 persons were recorded as literate in that script, for Baluchistan with 3,844, and Delhi with 175. Meanwhile the paradox continues of the most anti-British elements in India having to debate their politics

in English, while in an article advocating the substitution of Hindi for English as a common language for India an Indian newspaper (itself published in English) adopted as a slogan the words "Linguistic Inqilab Zindabad", translatable perhaps "Up the *Zabāni* Rebels!", and to complete the picture the existing superfluity of vernacular scripts has been inflicted with an addition during the decade under review. In Burma a Chin reformer named Pao Chin Hao (*vide infra*, appendix to this chapter) has invented a new religion together with a script inspired by the deity, whose literal designs seem derived from the Burmese and Roman alphabets. This script, intended to fill the absence of any indigenous Chin system of writing, has unfortunately got so far in its short period of existence as to be used in a spelling book and in a printed translation into the Kamhao-Sokte language of the Sermon on the Mount, though both these appear to be produced from photozincographic blocks and not from founded type. A specimen passage from the Sermon on the Mount will be found with a transliteration in the chapter on Language in the Burma Census Report and the first two pages of the spelling book appear below with a transliteration.

Section ii.—Linguistic Pre-history.

154. In 1867 it was pointed out by Mr. E. Thomas in a letter to the Asiatic Society of Bengal that the Aryan invaders of southern Europe and south-west Asia had invented no alphabet of their own in the course of their wanderings, but were in every case indebted to the country in which they settled for the provision of characters for the reduction of their speech to writing. His inference was that in the case of India the Sanskrit alphabet had its ultimate source in some method of writing known to the pre-Aryan inhabitants. This suggestion was immediately attacked and scouted as incompatible with the then unquestioned view that the Indo-Europeans found India a completely uncivilized country inhabited by barbarous tribes, and while a probably Semitic origin for the earliest form of the Devanagari script was generally admitted, it was regarded as a post-Aryan importation. It has taken sixtyfive years to find evidence that the Brahmi alphabet is after all derived from the symbols used on their seals by the pre-Aryans of the Indus Valley*, and that the theory that the symbols of the Brahmi script were imported from Phœnicia during the first millenium B. C., or locally invented after the Indo-European invasion, is not only now unnecessary but improbable. For although Professor Konow and some others are not yet entirely satisfied, Professor Langdon seems to have effectively demonstrated the connection between the Brahmi script and the signs of the Mohenjodaro seals, while Dr. Pran Nath seems to have arrived independently at the same conclusion, and Mr. Thomas seems to be justified at last in the analogy he drew between the sources of the Indo-European alphabets in Greece and in India respectively. What Langdon says is that if his two main hypotheses are true, *i.e.*, the identity of the Indus with the Sumerian signs and the derivation of the Brahmi characters from the Indus signs 'then it must follow that the Aryan Sanskritists gave values derived from their own language to these characters. In other words they knew the ideographic meanings, translated them into Sanskrit, and derived the syllabic values from the Sanskrit words". This alone is enough to explode the theory, if any retain it, that the existing civilization of India postdates the Indo-European invasion, for had the people of the Indus valley been exterminated or expelled their symbols could not have furnished the basis for the literature of their conquerors, and though it is possible that the Indus valley itself had, as Sir John Marshall holds, been vacated before the Rigvedic Aryans came in, it is quite obvious that there must have been a fusion of culture either there or elsewhere, and it was probably, in fact it must have been, in the Ganges basin. The Brahmi alphabet.

155. This raises the question, which cannot be answered at any rate until the Mohenjodaro script is completely deciphered, as to what language was spoken in Upper India before the Indo-Europeans. The most natural hypothesis would be that the language was a Dravidian one, since that is the most widely spread family in Austroasiatic

* Mr. Kanakasabhai states (*The Tamils 1,800 Years Ago*, page 45) that "it was from the Nagas that the Aryas first learnt the art of writing; and hence Sanskrit characters are to this day known as Deva-Nagari", but he quotes no authority or reference for what is perhaps a mere surmise based on a verbal similarity.

India after the Indo-European, against which it has successfully held its own in the south. The general tendency among languages appears to be for the easier and the socially more useful to supplant the more difficult or less useful, though the latter may at the same time by a similar process be replacing other less efficient or less estimated tongues. Thus the Goidelic language, probably at one time the prevailing language of Wales, was pushed to the western coast by the later Brythonic, and the latter has followed it in turn and is now in some parts of Wales the slowly disappearing tongue of descendants of those whose natural speech was at one time Goidelic (which only survives in certain forms of enumeration, place-names and a few words of Irish or the so-called fairy speech), and in some cases probably an even earlier and pre-Goidel language. Similarly it seems probable that many tribes in India who now speak a Dravidian language formerly spoke a Munda one. At any rate the fact that the Oraon, for instance, speaks a Dravidian language is no evidence at all that he is not racially nearly allied to the Munda with whom his culture would appear to connect him, though culture again like language, is not a criterion of race.* Similarly the Malers or Sauria Paharias of the Rajmahal hills still speak a Dravidian language, though their relatives the Mal Paharias have adopted an Indo-European one. Both tribes have apparently been pushed back from their more fertile lands by Santals who have come up from the isolation of the Chota Nagpur Plateau with what is probably a still more ancient language than Dravidian, and one which is actually likely to have been the original language of both Mal and Sauria Paharias. The position in India has been much complicated by its history, for it seems that probably Munda languages once occupied the greater part of Upper India, but were pushed back to the hills and forests by the early civilization of the Indus and Ganges valleys speaking probably Dravidian languages. In the alternative the language of the earliest civilization may itself have been a Munda language and been superseded by the Dravidian of later arrivals. The Austroasiatic languages are the most widely distributed in the world as far as geographical distances go, being found from the Punjab in the North to New Zealand in the south and from Madagascar in the west to Easter Island in the east. Von Baer's zoological law that the most widely distributed in space are also the most widely distributed in time can probably be applied with equal force to all languages which have preceded modern methods of rapid distribution, and if so indicates unquestionably that the Austroasiatic is an older group of tongues than the Dravidian, and the obvious inference is that they preceded Dravidian in India. The Dravidian speakers however were thrust out of their domain by Indo-European languages before they had more than partially penetrated the hill fastnesses, and while some of the Munda speakers have retained their languages to this day others were apparently Indo-Europeanised in tongue without passing through a genuinely Dravidian stage, though having assimilated a number of borrowed words, while others, whose Munda language seems to have survived both the Dravidian and Indo-European occupations of the Ganges valley, have been Dravidianised after the latter event by a northerly movement of tribes from the Dravidianised south. There is however, a serious void in our knowledge in that no intensive work appears to have been done on the tribal dialects of southern India, so that it is impossible to say whether the Munda languages ever penetrated to the extreme south of India or not. The Linguistic Survey unfortunately did not include southern India in its scope, and there is therefore a crying need for an intensive study of the dialects spoken by such tribes as the Kadar, Kurumans, Paliyans, Paniyans and Thanda-Pulayans with the object of discovering whether or no any Munda survivals are to be found. If Munda languages extended to southern India, they must inevitably have left some traces in the speech of the pre-Dravidian inhabitants. If they did not we need to know what was the pre-Dravidian language there. Some tribes or castes, *e.g.*, the Kakkalans of Travancore, are reported to have languages peculiar to themselves.

Another obscure and debatable point in regard to the distribution of the Munda languages is the direction from which they reached India. Their connection with

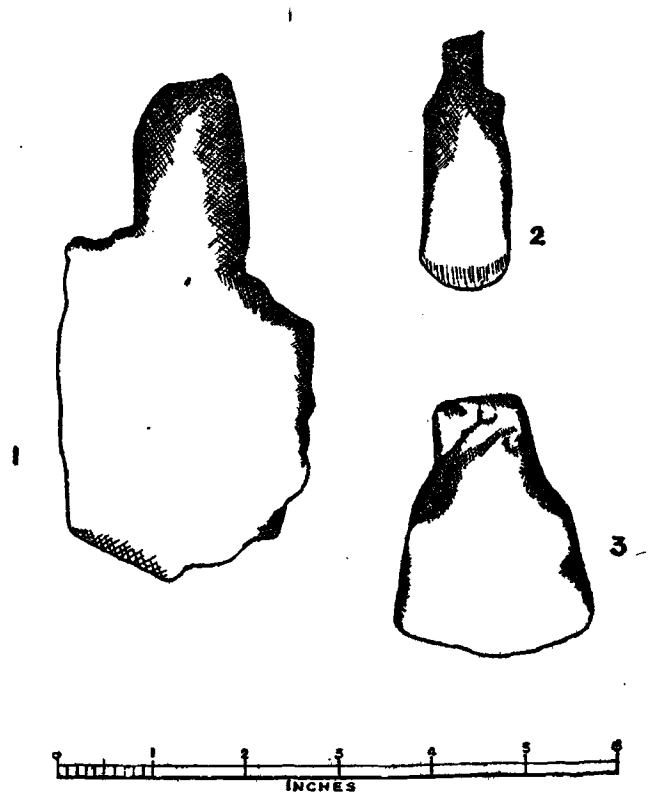
* Dr. Guha regards Oraon skulls as showing some physical differences from those of Mundas, but admits, I think, a very close relationship. At any rate the co-efficients of racial likeness given by him for Oraon and Munda show a difference of only 1·79.

the rest of the Austroasiatic family has suggested diffusion from the east westwards, in which case they must have penetrated north-west up the Ganges Valley and along the foot of the Himalayas and up into the hills by such routes as the Kangra Valley, surviving now only in the inner ranges between Ladakh and Sikkim. South-westwards on the other hand they survive in the west of the Central Provinces and must have extended to the Vindhyas and possibly to the west coast, as Bhili at any rate contains some Munda remnants and the very name of the Kolis suggests Munda affinities. Southwards the Sawaras of the Vizagapatam and Ganjam hills and the Gadabas of the adjoining tracts in the Central Provinces have definitely Munda tongues, though the western branches of this tribe, which extends at least to the borders of Rajputana, have lost their distinctive speech, and several of the Gond groups have culture elements which suggest Austroasiatic affinities, the Maria Gonds, for instance, the Koyas, the Bhatras and the Parjas of Bastar and Jeypore, where the so-called Bonda Parjas call themselves Bonda simply (as if Munda with a cold in the head), shave the heads of their women like Konyak Nagas of the Chagyik group and dress them in masses of bead ornaments and narrow petticoats open on one hip exactly like some of the Konyak Naga tribes among whom Mon-Khmer linguistic survivals can be traced. It may be noted in passing that this narrow petticoat is very suggestive of the garment worn by the clay figurines of the (?) Mother Goddess found in quantities in Harappa and Mohenjodaro as also in Crete. The Ods or Waddars, who seem to have Munda affinities, go further south on their wanderings, but their homeland is Orissa, and it seems possible that the Badagas of the Nilgiris may have cultural affinities with some Munda tribes. Nevertheless the most southerly point to which the Munda languages have yet been traced is north of the Godavari river. The southerly distribution of the Munda languages however does not necessarily affect the question of the direction from which they reached India, and it seems just as likely that they came from the north-west and spread down the Ganges Valley to the east as that they came up the valley in the opposite direction. Moreover, if Munda's affinity with the languages of south-east Asia and the Pacific be unquestioned it is also possible that it had affinities with the agglutinative Sumerian language westwards of it, and it would possibly be the safest hypothesis that various branches of the Austroasiatic languages originally radiated in a more or less southerly direction from a common centre in central or south-east Asia, even though it seems certain that the Indus Valley civilization affords a link between Upper India and Sumer.*

An important position in the distribution of the Austroasiatic languages in India is held by the Nicobar Islands. Nicobarese according to the Linguistic Survey, occupies a position intermediate between Munda and Mon-Khmer. Meillet and Cohen (*Les Langues du Monde*) classify Nicobarese with the Mon-Khmer family, but remark that it forms an exception to the rest of that group, in retaining the use of suffixes to form derivatives, a character which it has in common with Munda, "Il est difficile de décider", they continue, "si la nikobarais a innové sous des influences occidentales ou s'il a conservé un trait ancien, aboli depuis longtemps dans les langues parlées à l'est". The very isolation of the Nicobars, and their complete absence of contact for many hundreds of years with any language of the Munda group is in itself a solution to the doubt expressed, and the inference is that the Munda languages generally retain a more ancient characteristic lost by the Mon-Khmer branch, a consideration which inclines one to the view that their distribution has at any rate not been from east to west. On the other hand some account must be taken of the theory, favoured apparently by Prof. Sylvain Lévi and by Prof. Craighill Handy, for instance, of Oceanic intrusions into India. In a paper on Polynesian origins (*Bernice P. Bishop Museum, Occnl. Papers, IX, 8*) Professor Handy attributes to an intrusion from Polynesia to the Asiatic mainland some of the cultural phenomena to be found in Indo-China, Burma, Assam and the west coast of India, mentioning specifically the outrigger canoe on the west coasts of India and Ceylon. This fits in with the known colonization of Madagascar from Indonesia, onto the route of which Ceylon would fall, and the clear traditions of immigrants such as the Iruvar (Izhavas), who form a fifth of the population of Travancore and Cochin, and

* Prof. Hodson points out to me that Hevesy (*Es gibt keine Austric Sprache*) has put forward the theory of a connection between the Munda and the Ugro-Finnish languages.

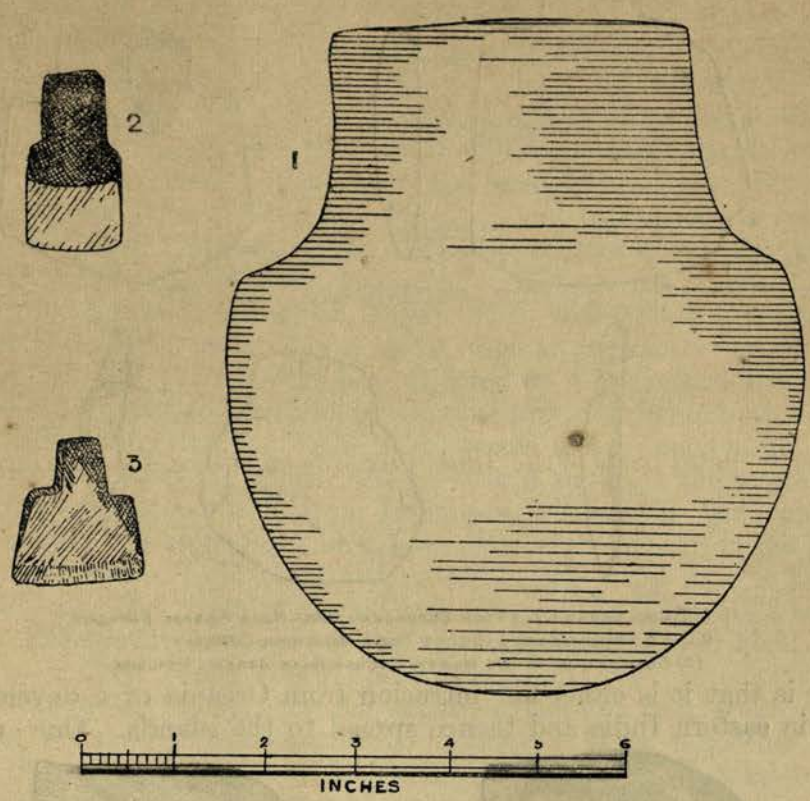
are almost equally numerous in British Malabar, having come from the direction of Ceylon within the historic period. It is posssible that the coconut palm, the planting of which in Orissa is still regarded as ceremonially dangerous except for Brahmans, has also been an introduction from Indonesia ; in the case of the Malabar coast its Malayalam name, *thengai*, ' fruit of the south ', suggests its having been brought by way of Ceylon. It is also clear that the traditions of the Mon-Khmer speaking Khasi point very definitely to migration from the east westwards as do some other traditions in Assam associated with cultures suggestive of Oceania. The words used, for instance, by the Naga tribes for a communal tabu (*penna*, *pini*) can be traced through the Malayan *puni* to New Zealand with a cognate meaning throughout. A recent article published by the Kern Institute suggests an Indonesian origin for the bronze " kettle drums " of the Karens of Burma which are found elsewhere in south-east Asia and were still being made at the end of the last century by the Shans of Nwedaung near Loikaw in the Karenni. Another cultural point of some importance is the " shouldered celt ". Handy claims this as an old Polynesian form, which is incontestable, and its distribution includes parts of the Indian Archipelago, Indo-China, Burma and parts of India. The natural inference is that its distribution has, like that of the Bachelors' House, which is much too widely spread among the primitive tribes of India to be attributed to Oceanic intrusions, started from India and spread to Polynesia, and this may indeed be the true interpretation of facts, but there are certain features of its Indian distribution which appear to point in the other



ROUGHLY SHOULDERED CELTS
1. FROM RAJGIR, BIHAR
2. FROM MADRAS (*Locality unspecified; Agency tracts*)
3. FROM ASSAM (*?Naga Hills*)

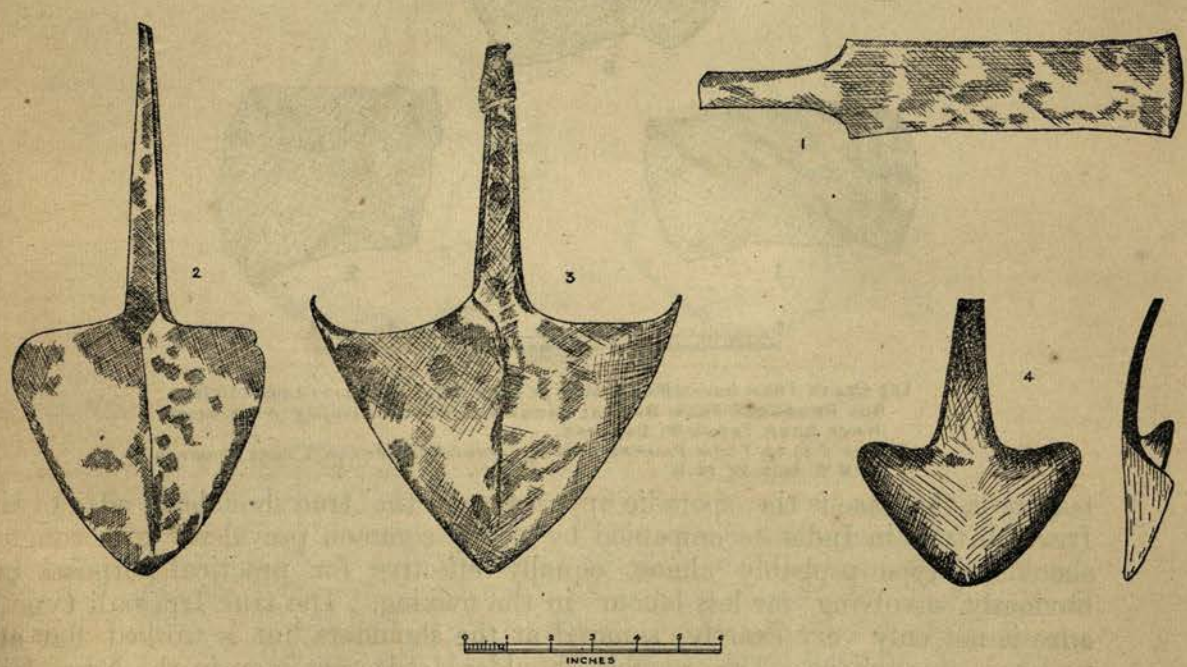
direction. Square-shouldered adzes abound in the Irrawadi valley ; specimens are found very rarely in the Santal Parganas and the Madras Agency tracts, and somewhat more frequently apparently in Chota Nagpur. They do not seem to occur elsewhere in India and are quite distinct from the usual type of Indian celt, which prevails in the Santal Parganas and in central and south India generally, and which may be correlated to the copper and bronze types of Mohenjodaro which are all unshouldered. In the Chota Nagpur area,

however, shouldered copper celts are obtained, generally, it seems, from



1. SHOULDERED COPPER IMPLEMENT, MANBHUM
2 & 3. HIGHLY FINISHED SHOULDERED CELTS, BURMA
(From Specimens in the Indian Museum)

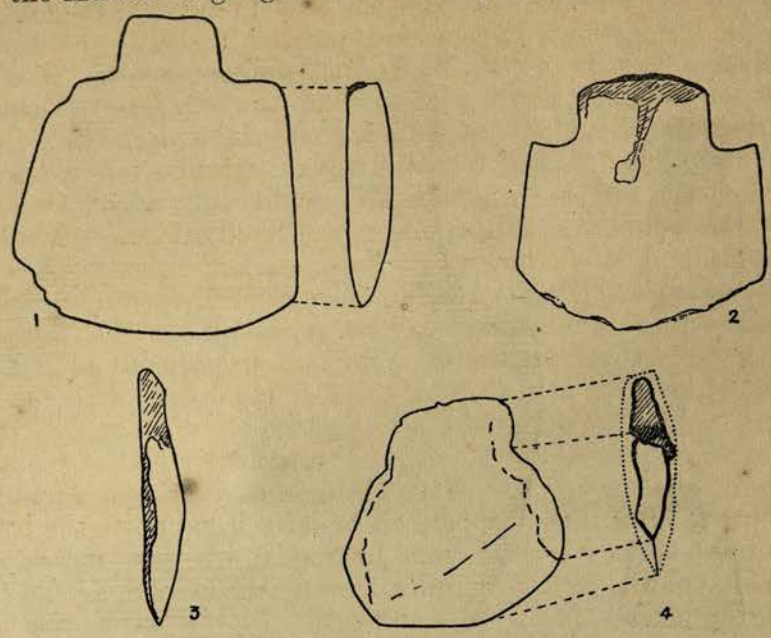
pre-historic burials, and these must be associated with the shouldered stone ones, as must the shouldered iron hoes still used by the Khasis



SHOULDERED IRON HOES
1. SAWARA (*Madras Agency*) 2 & 3. KHASI (*Assam*) 4. YIMTSUNGR NAGA HOE (*Assam*)

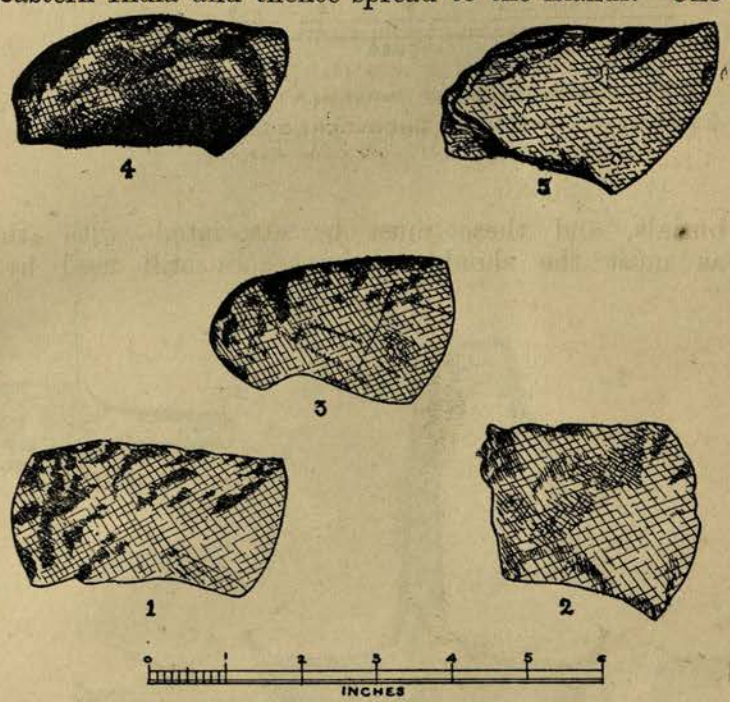
and by some Nagas in Assam, as by Sawaras and other Munda tribes in India proper. These hoes are as pronounced in type and as distinctive from the hoes in general use as the corresponding shouldered celts are among neolithic adzes. The distribution of the shouldered adze and hoe in stone and metal is not coextensive

with that of the Munda language and is not reported from the Nicobars, and the



1. Shouldered Celt from Bapugwema Naga Hills Assam ⅓ nat. size
2,3 & 4. Shouldered Celts from Waichong (2) Kobak
(3) Bolasan (4) In the North Cachar Hills Assam. ½ nat. size

inference is that it is either an intrusion from Oceania or a development which started in eastern India and thence spread to the islands. One rather curious



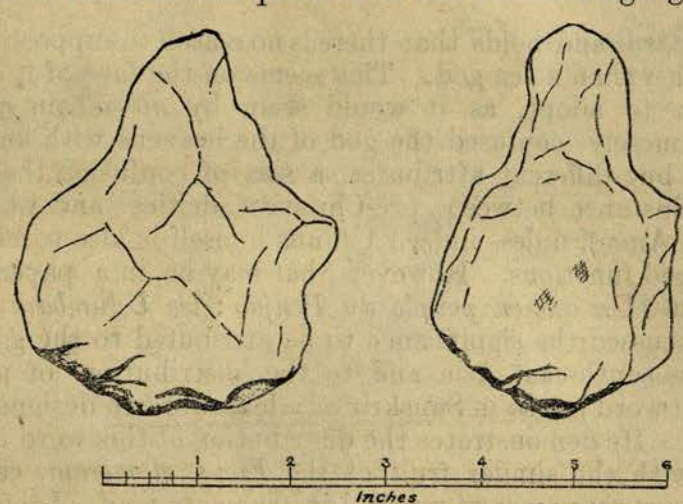
1 & 2 Celts from Indian Museum labelled "India" Locality unspecified
But probably from Santal Parganas, where similar artefacts
have been found by Bodding.
3.4.& 5. Celts from Pahang (*Malay peninsula*) After Evans Journal
F. M. S. Mus. XX. pl. iv

feature in this case is the sporadic appearance of the true shouldered adze of the Irrawadi type in India, accompanied by a very common prevalence of a roughly shouldered type probably almost equally effective for practical purposes but obviously involving far less labour in the making. The true Irrawadi type of adze is not only very exactly squared at the shoulders but is worked flat and polished throughout. The roughly shouldered adze common in the Naga Hills and the Santal Parganas is polished only on the plano-convex cutting edge, the tang end being left rough, and a shoulder roughly worked sometimes on one side of the adze only. In the N. Cachar Hills, in an area occupied by a number of prehistoric groups of enormous monolithic urns of phallic shape, which contained the ashes of the dead and are probably forerunners of the Khasi stone cists and clan burials, a number of stone axes and adzes have been found. The axes are triangular, flat and polished, but the adzes, or possibly hoes, have in many cases the appearance of having been worked in imitation of metal blades with a curved back like the existing Khasi or Yimtsung Naga hoes.* A similar inference is

* Specimens may be seen in the Pitt Rivers Museum at Oxford.

suggested by the shape of the curved stone axes found in the Santal Parganas and described by Bodding, which have a close parallel in some curved axe heads from Pahang in Malaya (see Journ. F. M. S. Mus. vol. xv, pl. iv), though here again the eastern type is much more perfect than the western. This suggests the possibility that the shouldered stone adze may be a derivation from the metal type and not its original, which would involve a distribution eastwards from the centre in which the copper originals are found and which corresponds closely with that of the non-Aryan kingdoms of the Saudyumnas, plausibly identified with the Munda and Mon-Khmer by Pargiter, and occcupying a country still occupied by Sawara and Munda tribes. This hypothesis would also account for the apparently quite unnecessary labour expended on the fabrication of the square-shouldered Irrawadi celt which is difficult to understand if it were not the natural result of an attempt to copy a metal original as exactly as the available material permitted. If this hypothesis be rejected we must regard the shouldered copper celt as subsequent to the shouldered stone adze. Either or both might have given rise to the existing iron hoe, since there seems to have been no copper age in Assam or Burma. But if the copper celt be later it supports the hypothesis that the shouldered adze is intrusive from Indonesia, whereas if the copper form be the original type the stone form must have reached Oceania from the west, and not India or Indonesia from the south-east. In the latter case it has to be considered whether the roughly shouldered adzes of the Naga Hills and Santal Parganas are degenerate forms of the flat square-shouldered and highly polished Irrawadi adze or their undeveloped prototype, and the development of so unnecessarily laborious a type as the square-shouldered adze from an equally efficient if less polished implement seems unlikely. If on the other hand the prototype be Oceanian it cannot be Indian and in that case we must regard the square-shouldered adze as having degenerated in its original material in one place while leading perhaps simultaneously to improved copper and iron types in others, not perhaps an impossibility. It would appear however on the face of it that the shouldered adze is a type much more likely to originate in metal than in stone.*

Shouldered adzes have involved a digression from the matter of language, but it is difficult to consider the question of the Munda languages entirely apart

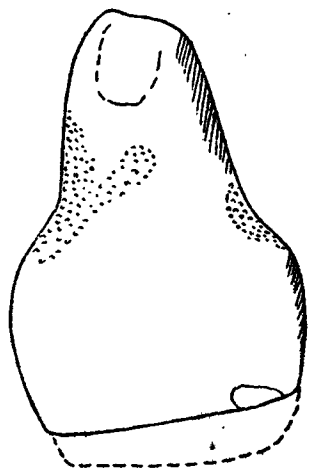


SHOULDERED HOES FROM AL-UBAID (after Hall & Woolley)

* The following bibliography of shouldered adzes is given here as the articles are many of them obscure and unknown to the general reader. Those marked with an asterisk are illustrated. *Proceedings of the Asiatic Society of Bengal, 1875,** and No. 1 of 1876. *Journal of the Asiatic Society of Bengal*, No. 3 *of* 1879 (Cockburn),* LXIII, iii, I of 1894 (Cockburn)* ; LXV, iii, No. I of 1896 (Peal)* ; LXX, iii, No. 1 of 1901 (Bodding)* ; LXXIII, iii, No. 2 of 1904 (Bodding) ; XXI, No. 3 of 1926 (Hutton)* ; XXV, No. 1 of 1929 (Mills and Hutton)*. *Man*, XVII-74 (July 1917, Balfour)* ; XXIV, 15, (February 1924, Hutton)*. See also Gurdon, *The Khasis* (1914), page 12 *et seq.* and Hutton, *The Sema Nagas* pages 254—258.

In the matter of canoes and their association with a westward drift from Polynesia the following may be referred to :—Hornell, *Origins, etc., of Indian Boat Designs, Memoirs of the Asiatic Society of Bengal*, VII, No. 3, pages 139-256 (1920)* ; Mills, *The Ao Nagas*, pages 76 and 79, notes (1926)* and Hutton, correspondence in *Folklore* XXXIX, No. 1, pages 94-95 (1928), and *M. A. S. B.* XI No. 1, pages 32, 39, 60, 63, 68* ; Peal, *Visit to the Naga Hills, J. A. S. B.* 1872*. It is to be noted that the dug-out " canoe " drum occurs in China, *vide* Colquhoun, *Across Chryse*, II, page 308, and its arrival in the Assam Hills from the direction of Indonesia is open to grave doubt.

from any cultural features which form part of the same complex. Although shouldered hoes of chert are clearly depicted (Hall and Woolley, *al-Ubaid*, plate XIII) as found in Sumer, while Mackay has found pottery hoes at Kish distinctly suggestive of the shouldered type, and Sir Flinders Petrie illustrates one polished stone "axe" of similar pattern from predynastic Egypt (*Prehistoric Egypt*, pl. XXVII), this particular feature does not seem to appear in India west of Chota Nagpur, but the vestiges of Munda occupation are to be found as already indicated all over northern India. Prof. Przyluski in a series of articles in the *Memoires* and in the *Bulletin* of the *Société dé Linguistique* has pointed out a number of Austroasiatic loans in vocabularies of Indo-European languages spoken in India. Indeed in a paper in the Royal Asiatic Society's Journal in 1931 he derives the name of *Varuna* as well as the Hittite *Aruna* from a Sumerian root and an Austroasiatic

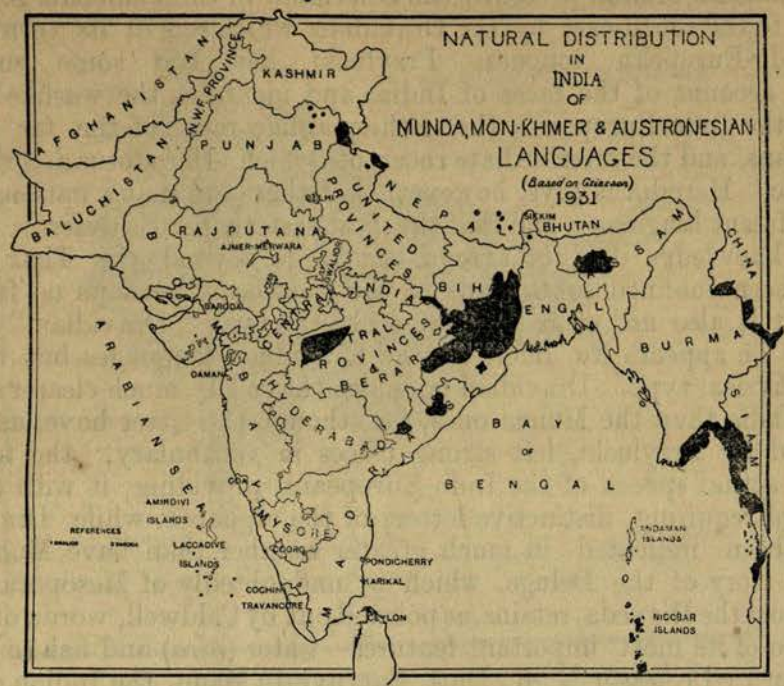


STONE IMPLEMENT:— PREDYNASTIC EGYPT
(*after Sir Flinders Petrie*)

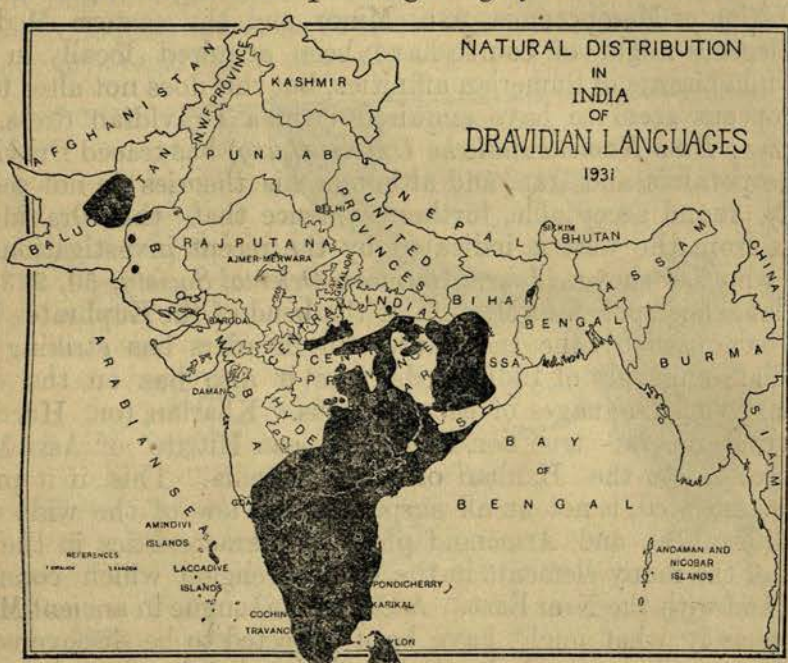
god of the sea, *Baru*, and holds that there is no reason to suppose that Varuna was ever anything other than a sea god. This seems on the face of it an unnecessarily extreme position to adopt, as it would seem by no means unlikely that the Indo-Europeans merely confused the god of the heavens with an indigenous god of similar name but different attributes, a sort of confusion that has frequently taken place for instance between pre-Christian deities and Christian saints in Europe (*e.g.*, St. Anne), unless indeed Uranus himself is also to be identified as a *Baru* with changed functions. However that may be, in a paper in the *Journal Asiatique* in 1926 (*Un ancien peuple du Penjab : les Udumbara*) Przyluski has penetratingly discussed the significance to be attributed to the gourd-origin myth so widespread in south-east Asia and to the distribution of names associated with a pre-Aryan word *tumba* in Sanskrit as a loan word to designate the colocynth *Lagenia vulgaris*. He demonstrates the distribution of this word in Indonesia and its association with the similar fruit of the *Ficus glomerata*, called in Sanskrit *udumbara*, with certain names of musical instruments made of gourds, and so with one of the functions of the widespread caste of degraded musicians known as Dōm, Domna, Dombar, etc., who may be regarded as representing early inhabitants of northern India. If we accept, as we must, the force of his argument we may see a survival of the Munda-speaking Austroasiatic population of northern India not only in the Doms, and no doubt in the very similar Korava group, but in the Kurumbas of southern India, to whose former predominance the tract in Malabar still known as Kurumbranad yet testifies and who are still associated like the ancient Kodumbara with the keeping of sheep and the production of woollen cloth, and with the Gadaba (no Telugu ear would tolerate "Gadamba"* and the *m* would drop out as easily as it has from Kuruba), who still speak a Munda language and seem to be associated with the kindred Bhatra tribe

* That this was the original form is perhaps confirmed by the existence in Vizagapatam district of the variants Gutob and Gutumuo for Gadaba.

in the Orissa hinterland as Przyluski's Udumbara with his Bhadra. By an



ingenious equation of these tribes with the Padaei of Herodotus, Przyluski associates these Munda-speakers with the Melanesians through the practice of eating their aged relatives like the Bataks of Sumatra, and this practice has been attributed to the Birhors of Chota Nagpur who speak a Mundari tongue (*cf. infra*, page 404). It remains to be pointed out that the Kuruba as also the Kuruman are still associated with megalithic and dolmenic burials like so many of the tribes who have retained their Austroasiatic speech, while the stories of aged-relative-eating have a distribution corresponding roughly with that of Munda languages



to-day, attributing the practice to hill tribes of Chhattisgarh and the Amarkantak tableland, to the Birhors of Chota Nagpur, to hill tribes in Assam, to some Kachins in north-west of Burma and to the Wa in the east of it. "The fruit is ripe", they say according to the Shans, "let us eat it", as they shake down their aged parents from the branches they have made them ascend.

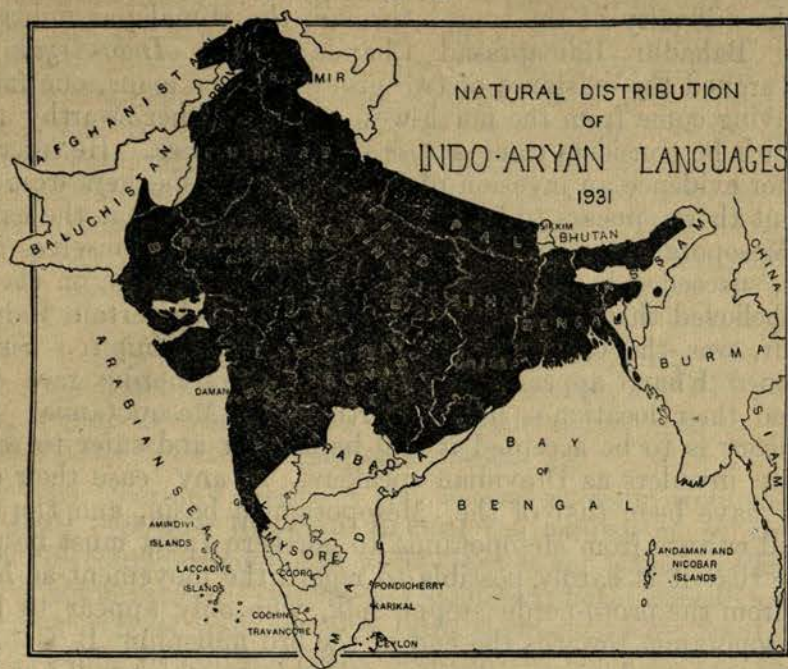
156. One conclusion of Przyluski's however, it does not seem possible to accept. He seems to regard the Austroasiatic speakers in northern India generally as having pushed out the Dravidian speakers from the whole of the fertile valleys of northern India leaving a mere island of Dravidian speakers in Baluchistan. It seems to us far more probable, in view of what has already been stated as to the wider distribution and greater antiquity of Austroasiatic languages, and maps of the distribution of Dravidian and Munda languages support **Dravidian.**

this view, that the Munda preceded the Dravidian in the Peninsula generally, and was pushed to the south-east by the Dravidian which was in its turn superseded by the Indo-European tongues. Przyluski has laid some emphasis on Herodotus' account of the races of India, and identifies the warlike race of the north with the Indo-Europeans, the Ethiopianlike race of the far south with the Dravidians, and the intermediate races, of which Herodotus describes two, as Austroasiatic. Herodotus says, however, that there are many nations of Indians speaking different languages, and that the most easterly part is desert. Apparently Herodotus' knowledge did not extend eastwards beyond the Thar desert and must have been confined southwards to the west coast perhaps no further than Bombay. It is also not clear in what sense the term "Dravidian" is used by Przyluski as he appears to refer to the Dravidian languages but to the pre-Dravidian physical type. Dravidian languages have left much clearer survivals in north-west India than the Munda ones, for though the latter have, as effectively demonstrated by Przyluski, left strong traces in vocabulary, the former have affected the actual speech of the Indo-Europeans, providing it with cerebrals to the extent of requiring distinctive letters of the alphabet, while Dravidian loan words have been indicated in much greater number than have Munda ones so far, and the story of the Deluge, which is undoubtedly of Mesopotamian origin and absent from the Rigveda, retains, as pointed out by Caldwell, words of Dravidian origin for two of its most important features—water (*nira*) and fish (*mina*), while, as pointed out by Professor N. K. Dutt, Satyavrata Manu, the Indian counterpart of Noah, is described in the Puranas as "the lord of Dravida". Professor Rapson (*Cambridge History of India, I,41*) regards Dravidian languages as having been "actually flourishing in the western regions of Northern India at the period when languages of the Indo-European type were introduced." It seems therefore necessary to regard the Dravidian speakers as having been the latest pre-Indo-European occupants of Upper India, as having reached India from the north-west where their language remains among the Brahui, who actually regard the Mohenjo-daro ruins as the work of their ancestors,* and as having brought with them the ancient civilization of Mesopotamia, Asia Minor and the eastern Mediterranean. The Deluge legend might of course have been acquired locally in India from Austroasiatic inhabitants of Sumerian affinities, but this does not alter the fact that the Indo-Europeans seem to have acquired it in a Dravidian dress. Schoener (*Alt-dravidisches: Eine Namenkundliche Untersuchung*) has traced Dravidian place-names in Mesopotamia and Iran, and although his theories do not seem to have been generally found acceptable, further evidence that this Dravidian tongue reached India from the west is indicated by the recent investigations (1930) of G. W. Brown who has shown (*Jour. American Oriental Society*, 50, 273. *sqq.*) that the Khārian language spoken in Mitanni at the bend of the Euphrates both before and after its conquest by the Indo-European invaders has striking similarities to the Dravidian languages of India today, as it also has on the other hand with some surviving languages of the Caucasus. Kharian (or Hurrian) is also stated to have been "the true non-Indo-European Hittite of Asia Minor" and to be nearly related to the Haldian of early Armenia. This, if it prove to be definitely substantiated, is not at all surprising in view of the wide distribution of both Mediterranean and Armenoid physical characteristics in the population of India, and of the many elements in the Hindu religion which connect it with Mesopotamia and with the Near East. A Dravidian tongue in ancient Mesopotamia is in fact precisely what might have been expected to be discovered now that we know for certain from the Indus Valley finds what has long been suspected, that India was not an isolated welter of australoid tribes till the Indo-Europeans entered it in the 2nd millenium B. C., but had a civilisation, comparable to and in communication with the ancient kingdoms of Mesopotamia, far older and in most ways more highly developed than that of the Indo-European invaders who established themselves in India precisely as they did in Babylon, as barbarian rulers of more cultured peoples.

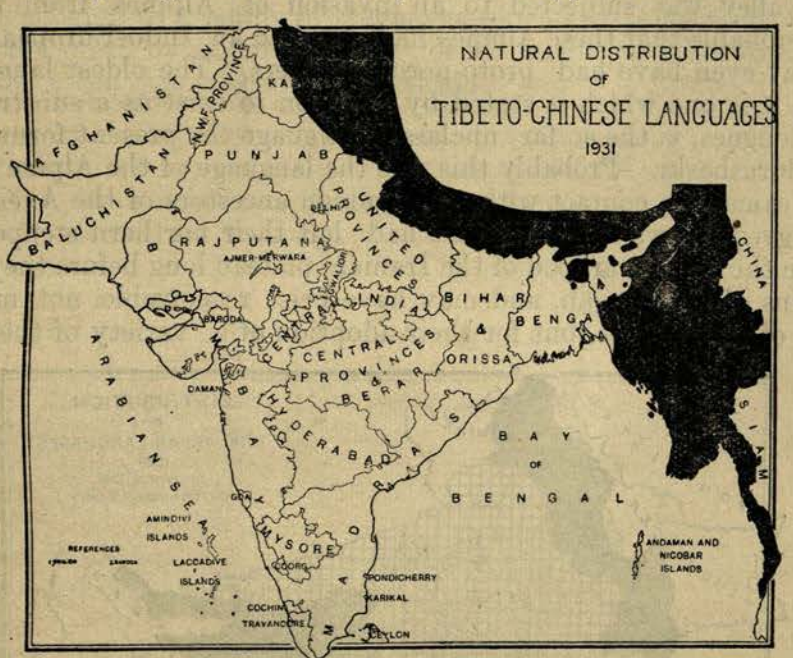
Indo-European. **157.** With the advent in India of the Indo-European we come at any rate within the range of historical tradition and the distribution and

* Personal information from Mr. E. J. H. Mackay while he was engaged in excavating that site. Colonel Sewell, however, regards the tradition as spurious and suggested by the excavators themselves.—J. H. H.

inter-relation of the Indo-European languages has been so exhaustively treated



by Sir George Grierson that the most that would be justified here is to sum up very briefly his conclusions. He tells us that Sanskrit is the purified literary language arising from the dialects of the Rigveda; that the languages of the "Outer Branches", that is Lahnda or Western Panjabi, Sindhi, Marathi, Oriya, Bihari, Bengali and Assamese, are derived from a different dialect of the original Indo-European tongue than are the languages of the "Inner Branch", Western Hindi, Panjabi, Gujarati, Bhili, Khandeshi, Rajasthani and the Pahari dialects. Eastern Hindi is intermediate between the two, while of the Inner Branch languages Gujarati at any rate retains traces of the Outer language which it has superseded. From the same colloquial source as Sanskrit arose the Midland language of the Inner Branch always regarded as not only the true type of the Indo-Aryan tongue

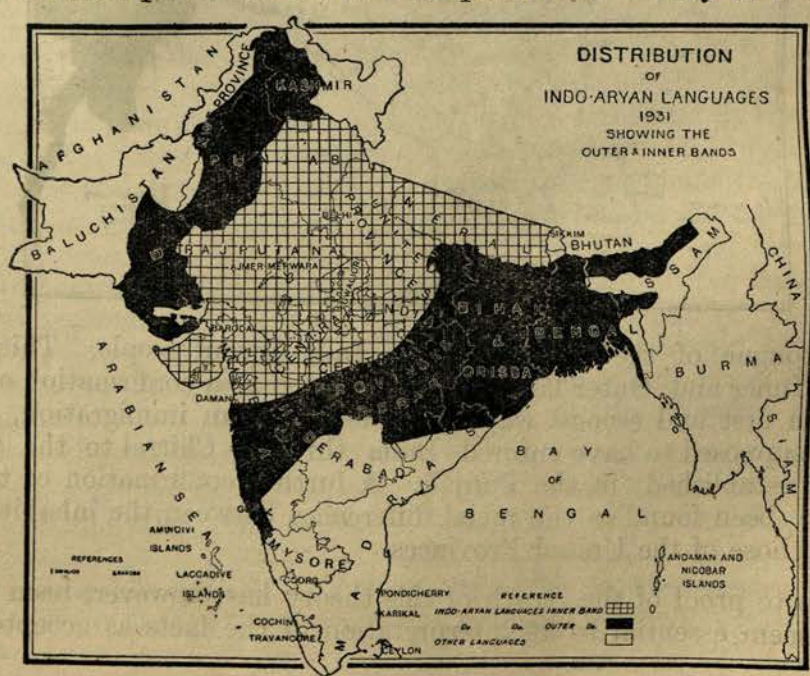


but as the tongue of the true and pure Indo-Aryan people. This difference between the Inner and Outer languages is regarded as a confirmation of Hoernle's theory of the first and second wave of Indo-European immigration, the second wave being supposed to have entered India through Chitral to the east of the first already established in the Punjab. A further confirmation of this view is said to have been found in the racial differences between the inhabitants of the Punjab and those of the United Provinces.

No definite proof of the truth of this theory has, however, been found, and it does not seem essential to an interpretation of the facts as accepted, though

it is not of course in conflict with them. It appears on the face of it unlikely on account of the difficulty of the route through the Himalayas indicated by the theory. Rai Bahadur Ramaprasad Chanda in his *Indo-Aryan Races* has convincingly argued the existence of two groups of Brahmans, one fair which he regards as having come from the north-west, and the other swarthy from south-west Asia which he considers came across the Arabian Sea. He infers from this and from other evidence an invasion of Indo-European speakers from the east of Babylonia, but there appears to be no evidence whatever that the earlier nordic invaders of Mesopotamia, who seem to have established themselves as rulers of the Hittites, succeeded in effectively imposing their language on their subjects, though it is believed that the Kanesian dialect, in which certain Indo-European features occur, was the official tongue of the Hittite Empire. Similarly the above-mentioned Kharri appear to have been a non-nordic race with nordic chieftains, and their location is in the north-west of Mesopotamia. If therefore Chanda's theory is to be accepted it will be simpler and safer to regard these Mesopotamian invaders as Dravidian speakers. In any case their culture and religion must have been that of the Mesopotamian basin, and the movement of peoples and culture from Mesopotamia to northern India must be put at such an early date that it is hardly possible to regard the movement as having had any impulse from the proto-nordic steppe folk, who only appear to have begun to invade Mesopotamia towards the end of the 3rd millenium B. C. Modified to this extent there is much to support Chanda's theory, which will not then differ in effect from that already advanced of a previous invasion of Dravidian speakers.

There is moreover another interpretation possible of the distribution of the Inner and the Outer Bands of Indo-Aryan languages. The Outer Band is that of languages which have retained certain features characteristic of the Pisacha or Dardic group, a group of languages still spoken in the Pamirs and in the north-western hills of India. The Inner Band has none of these features. It may be added that it is the Inner Band which has developed a script, on which the Outer is dependent. It will be pointed out in a subsequent chapter that there is very good reason for supposing that between the end of the Mohenjodaro civilisation in the Indus valley and the entry of the Rigvedic Aryans the Indus valley was subjected to an invasion of Alpines from the Pamirs. It is not improbable that these Alpines had acquired an Indo-European language, and they may even have had proto-nordic leaders. The oldest language in the Pamirs, and it is one which is stated by Grierson to exist as a substratum to all the Dardic tongues, is the so far unclassed language the present form of which is known as Burushaski. Probably this was the language of the Alpine inhabitants before they came into contact with the common ancestors of the Avesta Iranians and the Rigvedic Aryans. But these had left their northern steppes and were wandering in the neighbourhood of the Iranian plateau long before they descended on the plains of the Punjab, and may have been responsible not only for the disturbance of the Alpines, but for their adoption of a variety of their language.



It is also possible that they had infected the Alpine culture and religion with some affinity to their own by supplying it with rulers and war-lords as they did to the Alpine peasants in Central Europe. The Pisacha language introduced in northern India would naturally be pushed out by the later Rigvedic Aryans, though their continued occupation of the whole of the west bank of the Indus and both banks of its upper waters would be quite enough to account for the assimilation to the Outer Band language of the narrow strip of land between Peshawar and Sialkot, which, if this theory be correct, should belong to the Inner group, much as the extension of the Inner Band to the Gujarat coast has interrupted the former continuity of the Outer Band from Baluchistan to Kanara, if indeed Gujarati should not still be classified with the Outer Band, which is at least a debatable proposition. Indeed some such strip of country lost to the Inner Branch must somewhere remain whatever be the hypothesis adopted, and Grierson (*Linguistic Survey*, I.i, 108) gives other reasons for a southward movement of Eranians or Pamiris subsequent to the Indo-Aryan invasion.

In any case Hoernle's theory of the second invasion from the north seems less likely than Professor Rapson's view of the occupation of the Punjab as occurring in the course of migration while that of the Ganges valley belongs to a later epoch of colonization. It must be recognised that if Sanskrit owes its script to the previous civilization of northern India there must have been amalgamation and an interchange of cultural ideas between the colonists and the pre-existing population, whether or not they already worshipped Vedic deities. The culture of Mesopotamia, when invaded by the Kassites and other northern warrior tribes, was vastly more developed in many respects than that of the invaders and there is no reason to imagine that the same was not the case in India. Hence it was that it was in the area of colonization and amalgamation that the Indo-European languages developed both writing and literature to the greatest heights. It was in the Attic language of Athens, where the invading northerner fused with the darkhaired Ionian, that literature and philosophy flourished, not at Dorian Sparta, where the population remained more martial perhaps, but less cultured, as the Punjab compared to the Madhyadesa. The most important and lasting gift of the Aryans to India was probably their language, a vehicle of communication and expression belonging to a family of languages which has proved its superiority in all parts of the world by superseding any other languages with which any of its members have come into effective competition.

SUBSIDIARY TABLE I.

Distribution of the population of each sex by language.

Language.	Total number of speakers (000's omitted). 1931. Males.	1931. Females.	1921. Males.	1921. Females.	Number per 10,000 of total population 1931. Males.	Females.	Where chiefly spoken.
1	2	3	4	5	6	7	
Vernaculars of India ..	**180,215**	**169,673**	**162,125**	**153,400**	**9,978**	**9,986**	
Austric Family	**2,676**	**2,667**	**2,260**	**2,269**	**148**	**157**	
Austro-nesian Sub-Family (Malay Group).	*3*	*3*	*3*	*3*	..	..	
Malay	2	2	2	2	..	..	Burma.
Salon	1	1	1	1	..	..	Do.
Austro-asiatic Sub-Family ..	*2,673*	*2,664*	*2,257*	*2,267*	*148*	*157*	
Mon Group (Talaing) ..	*154*	*151*	*97*	*92*	*9*	*9*	Burma.
Palaung-Wa Group ..	*88*	*88*	*74*	*74*	*5*	*5*	
Wa	11	11	7	7	1	1	Burma.
Palaung	70	70	59	59	4	4	Do.
Khasi Group (Khasi) ..	*114*	*120*	*98*	*107*	*6*	*7*	Assam.
Nicobar Group (Nicobarese)	*5*	*5*	*5*	*4*	..	..	Andamans and Nicobars.
Munda Branch	*2,310*	*2,299*	*1,984*	*1,990*	*128*	*135*	
Kherwari	2,018*	2,014*	1,748	1,755	112	119	Assam, Bengal, Bihar and Orissa and Central Provinces.
Korku	85	85	61	60	5	5	Central Provinces and Berar.
Kharia	79	73	68	69	4	4	Bihar and Orissa and Central Provinces.
Sawara	98	97	84	83	5	6	Madras.
Gadaba	22	22	17	16	1	1	Do.
Tibeto-Chinese Family ..	**6,909**	**7,101**	**6,364**	**6,521**	**383**	**418**	
Tibetan Group	*127*	*125*	*117*	*115*	*7*	*7*	
Bhotia	*127*	*125*	*117*	*115*	*7*	*7*	
Bhotia of Baltistan ..	68	69	74	74	4	4	Jammu and Kashmir State.
Bhotia of Ladakh ..	21	21	17	17	1	1	Ditto.
Pronominalized Himalayan Group.	*56*	*58*	*53*	*54*	*3*	*3*	
Kanauri	12	14	10	12	1	1	Punjab.
Kiranti	44	44	42†	41†	2	3	Bengal and Sikkim.
Non-Pronominalized Himalayan Group.	*52*	*50*	*53*	*48*	*3*	*3*	
Murmi	22	21	20	19	1	1	Bengal and Sikkim.
Magari	9	9	11	9	..	1	Bengal, Assam and Sikkim.
Rong or Lepcha ..	13	12	10	10	1	1	Bengal and Sikkim.
North Assam Branch ..	*9*	*9*	*8*	*7*	*1*	*1*	
Abor	7	7	7	7	..	..	Assam.
Bara or Bodo Group ..	*466*	*445*	*363*	*353*	*25*	*26*	
Bodo‡	148	143	138	133	8	8	Assam.
Garo	117	113	110	106	6	7	Do.
Tipura (Mrung) ..	104	94	82	81	6	6	Assam and Bengal.
Mikir Language (Mikir) ..	*64*	*62*	*56*	*53*	*4*	*4*	Assam.
Naga Group	*173*	*176*	*147*	*148*	*10*	*10*	
Angami	22	21	22	21	1	1	Assam.
Sema	19	19	17	18	1	1	Do.
Ao	15	18	14	16	1	1	Do.
Tangkhul	14	15	11	13	1	1	Do.
Naga (unclassed) ..	4	4	12	11	..	..	Do.
Kuki-Chin Group	*476*	*497*	*392*	*404*	*26*	*29*	
Manipuri	192§	200§	171	172	11	12	Assam.
Thado	28	29	16	17	2	2	Do.
Lushei	28	32	36	41	2	2	Do.
Chin (other unspecified) ..	60	61	55	56	3	4	Burma.
Kuki (other unspecified) ..	5	5	12	13	..	..	Assam and Bengal.

*Include Santali, Mundari, Ho, etc.
†Limbu, Khambu and Rai Combined.
‡1931 figures are only for Bara Bodo or Plains Kachari.
§Include Kathé also.

SUBSIDIARY TABLE I—*contd.*

Distribution of the population of each sex by language—*contd.*

Language.	Total number of speakers (000's omitted). 1931. Males.	1931. Females.	1921. Males.	1921. Females.	Number per 10,000 of total population 1931. Males.	Females.	Where chiefly spoken.
1	2	3	4	5	6	7	
Kachin Group (Kachin) ..	*76*	*81*	*73*	*78*	*4*	*5*	Burma.
Burma Group	*4,881*	*5,079*	*4,575*	*4,738*	*270*	*299*	
Burmese	4,332	4,522	4,135	4,288	240	266	Burma.
Arakanese	156	152	153	151	9	9	Burma and Bengal.
Intha	28	29	27	28	2	2	Burma.
Lolo-Muhso Group ..	*48*	*45*	*39*	*36*	*3*	*3*	
Akha	21	19	18	16	1	1	Burma.
Tai Group	*517*	*511*	*464*	*462*	*29*	*30*	
Khun..	16	16	16	17	1	1	Burma.
Shan	475	470	422	421	26	28	Do.
Karen Family	**669**	**672**	**558**	**556**	**37**	**40**	
Dravidian Family	**35,848**	**35,797**	**32,078**	**32,050**	**1,985**	**2,107**	
Dravida Group	*20,644*	*20,810*	*18,589*	*18,697*	*1,143*	*1,225*	
Tamil	10,073	10,339	9,284	9,496	558	608	Madras and Mysore State.
Malayalam	4,533	4,605	3,736	3,762	251	271	Madras, Cochin and Travancore.
Kanarese	5,690	5,516	5,253	5,121	315	325	Bombay, Madras, Hyderabad and Mysore.
Kodagu or Coorgi ..	23	22	22	18	1	1	Coorg.
Tulu	324	328	293	299	18	19	Madras.
Intermediate Group ..	*1,797*	*1,812*	*1,512*	*1,544*	*100*	*107*	
Kurukh or Oraon ..	521	517	430	436	29	30	Bihar and Orissa.
Malto..	35	36	33	33	2	2	Bihar and Orissa.
Gondi	926	939	798	819	51	55	C. P. and Berar and Central India Agency.
Kandhi or Kui ..	288	298	239	244	16	18	Madras and Bihar and Orissa.
Kolami	16	13	12	12	1	1	Central Provinces and Berar.
Andhra Language Group (Telugu).	*13,291*	*13,083*	*11,874*	*11,727*	*736*	*770*	Madras, Hyderabad and Mysore.
North Western Language (Brahui).	115	92	103	81	6	5	Baluchistan.
Indo-European Family ..	**134,083**	**123,410**	**120,851**	**111,995**	**7,423**	**7,263**	
Eastern Group (Eranian Branch)	*1,242*	*1,029*	*1,091*	*890*	*69*	*61*	..
Balochi	344	284	272	213	19	17	Baluchistan and Bombay.
Pashto	895	742	819	677	50	44	N.-W. F. Province and Baluchistan.
Dard Group	*820*	*690*	*705*	*599*	*45*	*41*	
Shina	36	32	14	14	2	2	Jammu and Kashmir State.
Kashmiri	783	656	687	581	43	39	Ditto.
North-Western Group ..	*6,803*	*5,769*	*4,893*	*4,131*	*377*	*340*	
Lahnda or Western Panjabi	4,603	3,963	3,050	2,602	255	233	Punjab and N.-W. F. Province.
Sindhi	2,200	1,807	1,843	1,528	122	106	Bombay.
Southern Group	*10,817*	*10,544*	*9,509*	*9,289*	*599*	*621*	..
Marathi	10,573	10,317	9,296	9,095	585	607	Bombay, C. P. and Berar and Hyderabad.
Eastern Group	*48,059*	*46,530*	*31,090*	*30,082*	*2,661*	*2,739*	..
Oriya	5,485	5,709	4,952	5,192	304	336	Bihar and Orissa and Madras.
Bihari	14,015	13,912	4	4	776	819	Rajputana, C. I. Agency and Bihar and Orissa.
Bengali	27,517	25,952	25,239	24,055	1,523	1,527	Bengal and Assam.
Assamese	1,042	957	895	832	58	56	Assam.
Mediate Group (Eastern Hindi)	*4,210*	*2,657*	*704*	*695*	*233*	*215*	C. I. Agency, C. P. and Berar.

SUBSIDIARY TABLE I—*concld.*

Distribution of the Population of each sex by language—*concld.*

Language.	Total number of speakers (000's omitted). 1931. Males.	1931. Females.	1921. Males.	1921. Females.	Number per 10,000 of total population 1931. Males.	Number per 10,000 of total population 1931. Females.	Where chiefly spoken.
1	2	3	4	5	6	7	
Central Group	*60,652*	*53,905*	*71,833*	*65,416*	*3,358*	*3,173*	
Western Hindi ..	37,743	33,804	50,210	46,504	2,090	1,990	U. P., Punjab, C. P. and Berar, C. I. Agency, Rajputana, Hyderabad State and Gwalior.
Rajasthani	7,271	6,627	6,656	6,025	403	390	Rajputana, C. I. Agency and Gwalior State.
Gujarati	5,610	5,240	4,967	4,585	311	308	Bombay, Baroda State and Western India States Agency.
Punjabi	8,799	7,040	8,961	7,272	487	414	Punjab and Jammu and Kashmir State.
Bhili	1,110	1,079	932	924	61	64	Bombay, C. I. Agency and Rajputana.
Pahari Group	*1,472*	*1,280*	*1,025*	*893*	*82*	*75*	
Central Pahari ..	6	1	4	..	..	..	United Provinces.
Eastern Pahari (Khas-Kura or Naipali).	251	162	167	113	14	10	Bengal, Assam and Sikkim State.
Western Pahari ..	1,211	1,115	854	780	67	66	Punjab and Jammu and Kashmir State.
Unclassed Languages ..	29	25	8	7	2	1	
Gipsy Languages ..	13	13	8	7	1	1	Bombay, Punjab, Jammu and Kashmir State and Rajputana.
Vernaculars of other Asiatic Countries and Africa.	**198**	**105**	**143**	**69**	**11**	**6**	
Indo-European Family ..	25	14	15	10	1	1	
Persian Group	*23*	*12*	*14*	*9*	*1*	*1*	
Persian	23	12	14	9	1	1	Bombay, Baluchistan and N.-W. F. Province.
Tibeto-Chinese Family ..	124	62	89	39	7	4	
Chinese Group	*124*	*62*	*89*	*39*	*7*	*4*	
Semitic Family	37	23	30	14	2	1	
Arabic	34	20	29	13	2	1	Bombay and Hyderabad.
Hamitic Family (Ethiopic Group, Somali).	3	2	4	2	..	..	Bombay.
Mongolian family	*8*	*4*	*1*	..	..	..	
Japanese Group (Japanese)	*3*	*1*	*1*	..	..	..	Bombay and Burma.
European Languages ..	**208**	**131**	**198**	**121**	**12**	**8**	
Indo-European Family ..	208	131	194	119	12	8	
Romance Group	*9*	*6*	*2*	*2*	*1*	..	
Portuguese	6	4	2	1	..	..	Bombay and Madras.
Teutonic Group	*198*	*125*	*191*	*117*	*11*	*7*	
English	196	123	191	117	11	7	

NOTE.—Owing to the omission of the minor languages and dialects the details in the above table do not work up in every case to the totals of Groups, which in turn do not work up to those for Families, the difference being due to the conversion of absolute figures into thousands.

SUBSIDIARY TABLE II.

Distribution by Mother Tongue of the population of each Province, State or Agency.

Province and Language.	Number of speakers per 10,000 of population.
India.	
Western Hindi	2,041
Bengali	1,525
Bihari	797
Telugu	752
Marathi	596
Tamil	582
Panjabi	452
Rajasthani	397
Kanarese	320
Gujarati	310
Oriya	319
Burmese	253
Malayalam	261
Lahnda or Western Panjabi	244
Kherwari	115
Sindhi	114
Bhili	63
Assamese	57
Western Pahari	66
Gondi	53
Pashto	47
Eastern Hindi	224
Kashmiri	41
Other Languages	371
Ajmer-Merwara.	
Rajasthani	7,633
Western Hindi	2,193
Other Languages	174
Andamans and Nicobars.	
Nicobarese	3,355
Other Languages	6,645
Assam.	
Bengali	4,289
Assamese	2,157
Eastern Hindi	638
Manipuri	398
Bodo (Plains Kachari)	305
Kherwari	318
Khasi	253
Garo	208
Oriya	219
Mikir	137
Eastern Pahari	147
Other Languages	931
Baluchistan.	
Balochi	3,073
Pashto	2,385
Brahui	1,468
Sindhi	1,750
Lahnda or Western Panjabi	591
Panjabi	225
Western Hindi	197
Other Languages	311
Bengal.	
Bengali	9,226
Eastern Hindi	320
Western Hindi	50
Kherwari	172
Oriya	31
Kurukh or Oraon	37
Tipura or Mrung	38
Eastern Pahari	26
Other Languages	100
Bihar and Orissa.	
Bihari	6,596
Oriya	2,017
Kherwari	672
Bengali	458
Kurukh or Oraon	155
Kharia	27
Malto	16
Other Languages	59
Bombay.	
Marathi	4,223
Gujarati	1,854
Sindhi	1,278
Kanarese	1,215
Western Hindi	595
Bhili	220
Rajasthani	115
Balochi	113
Khandesi	84
Telugu	62
Other Languages	241

SUBSIDIARY TABLE II—*contd.*

Distribution by Mother Tongue of the population of each Province, State or Agency—*contd.*

Province and Language.	Number of speakers per 10,000 of population.
Burma.	
Burmese	6,036
Shangale	624
Sgaw	341
Pwo	323
Shan (unsepcified)	2
Bengali	257
Yanbye	223
Arakanese	152
Taungthu	152
Talaing	208
Western Hindi	132
Telugu	110
Tamil	126
Kachin	105
Tavoyan	109
Palaung and Pale	95
Other Languages	1,005
Central Provinces and Berar.	
Western Hindi	3,116
Marathi	3,122
Gondi	714
Oriya	214
Rajasthani	193
Kurku	90
Kurukh or Oraon	79
Other Languages	2,472
Coorg.	
Kanarese	3,990
Kodagu or Coorgi	2,730
Malayalam	1,527
Tulu	874
Other Languages	879
Delhi.	
Western Hindi	9,225
Rajasthani	106
Panjabi	370
Other Languages	299
Madras.	
Tamil	4,013
Telugu	3,768
Malayalam	790
Oriya	391
Kanarese	366
Western Hindi	265
Marathi	28
Other Languages	379
North-West Frontier Province.	
Pashto	5,221
Lahnda or Western Panjabi	4,195
Panjabi	351
Rajasthani	3
Western Hindi	96
English	47
Other Languages	87
Punjab.	
Panjabi	5,095
Lahnda or Western Panjabi	2,590
Western Hindi	1,400
Western Pahari	593
Rajasthani	215
Other Languages	107
United Provinces.	
Western Hindi	9,968
Other Languages	32
Baroda State.	
Gujarati	8,676
Bhili	738
Western Hindi	320
Other Languages	266
Central India Agency.	
Rajasthani	2,483
Western Hindi	3,627
Eastern Hindi	2,247
Bhili	881
Gondi	534
Gujarati	95
Marathi	82
Other Languages	51

SUBSIDIARY TABLE II—*concld.*

Distribution by Mother Tongue of the population of each Province, State or Agency—*concld.*

Province and Language.	Number of speakers per 10,000 of population.
Cochin State.	
Malayalam	9,030
Tamil	549
Marathi	43
Telugu	101
Other Languages	277
Gwalior State.	
Western Hindi	6,327
Rajasthani	3,216
Bhili	214
Marathi	61
Gujarati	81
Other Languages	101
Hyderabad State.	
Telugu	4,830
Marathi	2,623
Kanarese	1,122
Western Hindi	1,090
Rajasthani	188
Gondi	53
Other Languages	94
Jammu and Kashmir State.	
Kashmiri	3,876
Punjabi	2,414
Western Pahari	1,737
Rajasthani	878
Bhotia of Baltistan or Balti	378
Lahnda or Western Panjabi	264
Other Languages	453
Mysore State.	
Kanarese	6,983
Telugu	1,572
Western Hindi	584
Tamil	478
Other Languages	383
Rajputana Agency.	
Rajasthani	7,667
Western Hindi	1,533
Bhili	641
Other Languages	159
Sikkim State.	
Eastern Pahari	3,539
Kiranti	2,608
Bhotia of Sikkim	994
Rong or Lepcha	1,203
Murmi	636
Other Languages	1,020
Travancore State.	
Malayalam	8,361
Tamil	1,547
Marathi	14
Other Languages	78
Western India States Agency.	
Gujarati	8,711
Sindhi	1,045
Western Hindi	168
Rajasthani	58
Other Languages	18

NOTE.—The figures for Provinces are inclusive of the states attached to them except in the case of Madras where they exclude Cochin and Travancore.

SUBSIDIARY TABLE III.

Number of persons speaking tribal languages compared with the strength of tribe.

Tribe and Language.	Strength of tribe as given in Table XVII.	Tribal mother-tongue only.	Number of persons speaking a subsidiary language in addition to tribal mother-tongue.	Province, State or Agency dealt with.
1	2	3	4	5
1. Arakanese	208,251	221,945	*	Burma.
2. Badaga	43,075	42,526	*	Madras.
3. Balochi	1,006,459	625,708	235,791	Baluchistan, Bombay and Punjab.
4. Bhili	1,973,435	2,185,876	209,328	Bombay, Baroda, Central India, C. P. and Berar, Gwalior, Hyderabad and Rajputana.
5. Brahui	224,415	207,040	48,585	Baluchistan and Bombay.
6. Chutiya	*	4,315	*	Assam.
7. Gadaba	47,026	43,667	31,886	Madras.
8. Garo	231,701	230,672	*	Assam and Bengal.
9. Gond	1,875,870	1,720,790	867,574	Bengal, Bihar and Orissa, C. P. and Berar, C. I. Agency and Hyderabad.
10. Kachari,† Mech and Dimasa	3,45,248	306,056	*	Assam and Bengal.
11. Kandhi or Kui	662,946	578,928	194,239	Bihar and Orissa and Madras.
12. Karen Group	1,367,673	1,341,066	782,832	Burma.
13. Kharia	159,303	137,659	108,266	Bengal, Bihar and Orissa and C. P.
14. Khasi	232,530‡	233,872	1,879	Assam.
15. Kherwari	1,174,976	894,732	298,777	Bengal, C. P. and Bihar and Orissa.
16. Koch	81,299	9,529	*	Assam and Bengal.
17. Kodagu or Coorgi ..	54,502	44,585	44,585	Coorg.
18. Korku	176,616	161,975	105,690	Central Provinces and Berar.
19. Kurukh or Oraon ..	865,272	984,486	620,889	Bengal and Bihar and Orissa.
20. Lalung	43,448	9,017	*	Assam.
21. Malto	59,891	70,755	9,732	Bengal and Bihar and Orissa.
22. Meithei or Manipuri ..	330,545	391,891	*	Assam, Bengal and Burma.
23. Mikir	129,797	126,457	*	Assam.
24. Murmi	42,241	42,642	37,348	Bengal and Sikkim.
25. Naga	272,527	349,111	*	Burma and Assam.
26. Newar	16,451	9,455	8,554	Bengal and Sikkim.
27. Palaung	138,746	138,656	*	Burma.
28. Rabha	69,154	27,006	*	Assam.
29. Rong or Lepcha ..	25,780	25,149	16,805	Bengal and Sikkim.
30. Salon	1,930	1,908	*	Burma.
31. Sawara	211,781	185,562	71,448	Madras.
32. Shina	14,139	68,199	413	Jammu and Kashmir.
33. Tai Group	1,037,406	1,021,909	247,781	Burma.
34. Tipara	203,069	191,725	*	Assam.
35. Toda	597	597	*	Madras.
36. Wa	10,465	22,142	*	Burma.

* Information not available. † Including Plains-Kachari.
‡ Excludes certain others included under Naipali Castes.

Pages 1 and 2 of 'Spelling Book in Kamhow-Sokte' by Pau-Chin-Hau and Than-Chin-Kham.

pa ka la ma da ya va nga ha ga xa hsa ba tga ta hta na hpa ra fa cha

à ài i aw u ua ia

ab ag ad am an al au ang ai

These are tonal signs

pà	pai	pi	paw	pu	pua	pia
kà	kai	ki	kaw	ku	kua	kia
là	lai	li	law	lu	lua	lia
mà	mai	mi	maw	mu	mua	mia
dà	dai	di	daw	du	dua	dia
yà	yai	yi	yaw	yu	yua	yia
và	vai	vi	vaw	vu	vua	via
ngà	ngai	ngi	ngaw	ngu	ngua	ngia
hà	hai	hi	haw	hu	hua	hia
gà	gai	gi	gaw	gu	gua	gia
xà	xai	xi	xaw	xu	xua	xia
hsà	hsai	hsi	hsaw	hsu	hsua	hsia
bà	bai	bi	baw	bu	bua	bia
tgà	tgai	tgi	tgaw	tgu	tgua	tgia
tà	tai	ti	taw	tu	tua	tia
htà	htai	hti	htaw	htu	htua	htia
nà	nai	ni	naw	nu	nua	nia
hpà	hpai	hpi	hpaw	hpu	hpua	hpia
rà	rai	ri	raw	ru	rua	ria
fà	fai	fi	faw	fu	fua	fia
chà	chai	chi	chaw	chu	chua	chia

ab	ag	ad	am	an	al	aau	ang	aia
aib	aig	aid	aim	ain	ail	aiau	aing	aiia
ib	ig	id	im	in	il	iau	ing	iia
awb	awg	awd	awm	awn	awl	awau	awng	awia
ub	ug	ud	um	un	ul	uau	ung	uia
uab	uag	uad	uam	uan	ual	uaau	uang	uaia
iab	iag	iad	iam	ian	ial	iaau	iang	iaia

pab	pag	pad	pam	pan	pal	paau	pang	paia
paib	paig	paid	paim	pain	pail	paiau	paing	paiia
pib	pig	pid	pim	pin	pil	piau	ping	piia
pawb	pawg	pawd	pawm	pawn	pawl	pawau	pawng	pawia
pub	pug	pud	pum	pun	pul	puau	pung	puia
puab	puag	puad	puam	puan	pual	puaau	puang	puaia
piab	piag	piad	piam	pian	pial	piaau	piang	piaia

kab	kag	kad	kam	kan	kal	kaau	kang	kaia
kaib	kaig	kaid	kaim	kain	kail	kaiau	kaing	kaiia
kib	kig	kid	kim	kin	kil	kiau	king	kiia
kawb	kawg	kawd	kawm	kawn	kawl	kawau	kawng	kawia
kub	kug	kud	kum	kun	kul	kuau	kung	kuia
kuab	kuag	kuad	kuam	kuan	kual	kuaau	kuang	kuaia
kiab	kiag	kiad	kiam	kian	kial	kiaau	kiang	kiaia

lab	lag	lad	lam	lan	lal	laau	lang	laia
laib	laig	laid	laim	lain	lail	laiau	laing	laiia
lib	lig	lid	lim	lin	lil	liau	ling	liia
lawb	lawg	lawd	lawm	lawn	lawl	lawau	lawng	lawia
lub	lug	lud	lum	lun	lul	luau	lung	luia
luab	luag	luad	luam	luan	lual	luaau	luang	luaia
liab	liag	liad	liam	lian	lial	liaau	liang	liaia

APPENDIX TO CHAPTER X.

Extracts from correspondence between the Census Commissioner for India and Mr. J. J. Bennison, Census Superintendent of Burma in regard to a new written character in Burma and Assam.

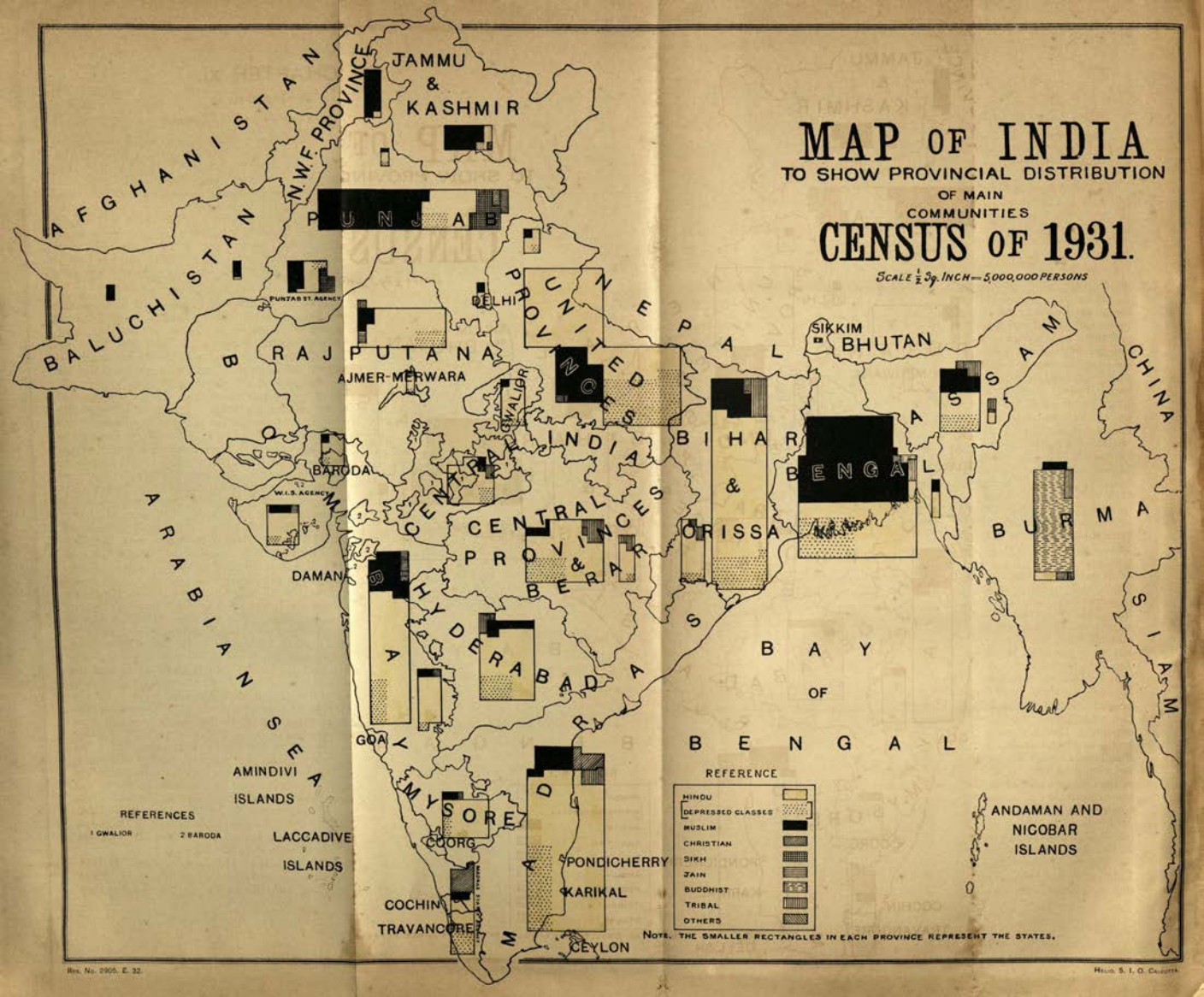
(*i*) FROM CENSUS COMMISSIONER FOR INDIA TO CENSUS SUPERINTENDENT FOR BURMA, DATED THE 24TH MARCH 1932.

"I think I am right in saying that the character that has been revealed to Pao Chin Hao involves an alphabet of an unconscionable length, since he has a different character, I think, for every possible monosyllable. At any rate, that is the line on which his revelation ran according to the information I had from Manipur. One official sent me sheets of Pao Chin Hao's characters and said they were too many to record completely."

(*ii*) FROM CENSUS SUPERINTENDENT FOR BURMA, TO CENSUS COMMISSIONER FOR INDIA, DATED THE 9TH MAY 1932.

"I understand from the Rev. W. Sherratt, (Agent of the British and Foreign Bible Society in Burma) that the original alphabet as revealed to Pow Chin How did contain a very large number of characters. Mr. Sherratt visited the Chin Hills in March 1931 and pointed out to him that the large number of characters was a very great drawback. Pow Chin How and a few of his followers then got together and reduced the number considerably. Three or four of them then came down and saw Mr. Sherratt about May 1931 and eventually 'The Sermon on the Mount' was printed. A copy is enclosed herewith. Mrs. Sherratt wrote out the words in Indian ink and this was photographed and zinc plates made. There are only 21 consonants in the alphabet but in addition to the usual vowels there are a few 'final syllables', similar to those in Burmese. There are also a few tones. Pow Chin How's eldest son (Shian Ko Chin) and another of his followers (Than Chin Kham) came down in March this year to see Mr. Sherratt and I saw them once. Than Chin Kham is a vernacular school-teacher in Tonzan village near Tiddim and he knows Burmese. I understand he has played a large part in producing the new alphabet. He is translating St. Matthew into the new characters. He uses the Burmese version of St. Matthew and also a Chin version (in the Roman character) which was done by Mr. Cope, the American Baptist Missionary in the Chin Hills. He maintains that the Chin sounds can be properly represented in these new characters but not in the Roman characters.....He does not know any English but he has a fairly good knowledge of Burmese.....Mr. Cope apparently thinks there is no need for another character as the Roman character is already well-known in the Chin Hills and the school text-books are all in the Roman character: in addition to being an A. B. M.* padre he is also an Honorary Inspector of Schools."

* American Baptist Mission.



Res. No. 2905. E. 32.

Heliog. S. I. O. Calcutta.

CHAPTER XI.

Religion.

Section i.—Religion and the Census.

158. Although on the face of it religion would appear to be a concern purely for the individual, and in spite of the recent pronouncement of an eminent Frenchman to the effect that the deity is an academic subject ("*la question de Dieu manque d'actualité*"), yet strongly held religious convictions inevitably react on political situations and cannot be divorced from those aspects of social life of which the State and therefore the census must take cognizance. This is particularly the case in India, which is still the most religious country in the world, and must be regarded as the justification for the importance attached to religion in the census of India as compared, for example, with that of United States of America, where culture is comparatively independent of religion. In India the two are so inseparably bound up that religion, always a conservative force, appears as a positive obstacle to cultural unity. 'Religion'.

It has been argued that the census statistics of religion tend to perpetuate communal divisions; the census cannot, however, hide its head in the sand like the proverbial ostrich, but must record as accurately as possible facts as they exist, and there is no question of the existence of communal differences which are reflected at present in political constituencies. It is not in its devotional aspect that the census is concerned with religion, but in its social, and it cannot be denied but society in India is still largely organised on a basis of caste and religion, and social conduct is much influenced by practices which may not be in themselves religious but which are subject to religious sanctions. The age of marriage, the practice of remarriage, the observance of purdah, the occupations of women, the inheritance of property and the maintenance of widows, even diet, to name a few obvious cases, vary according to the caste and the religious community of the individual. The time will no doubt come when occupation will serve the purpose at present served by religion and caste in presenting demographic data, but that time is not yet, and at the present moment their barriers have not so far decayed that their social importance can be ignored for public purposes, though progress in this direction may well prove much faster than one anticipates. The social importance of religious differences is reflected in the controversial disputes about religious terminology for census purposes. The census terms are :—Hindu, Jain, Buddhist, Sikh, Zoroastrian, Jew, Muslim, Christian, Tribal and Others. This is the most practical division available but is admittedly not satisfactory since difficulty arises in the case of many of these terms, particularly so in that of the term *Hindu* which is not entirely exclusive of some of the other terms used. Many Hindus for instance claim that Sikhs, Jains and Buddhists are also Hindu inasmuch as their faiths had their origin in the Hindu religion. On the other hand this claim is stoutly repudiated by the great majority of Sikhs and it was therefore necessary to treat the terms Hindu and Sikh as mutually exclusive. In the case of Jains many, but by no means all, regard themselves as Hindu and orders were issued that any Jain who wished to record the fact that he was also Hindu could do so and the tables would show in a footnote the number of Jains who consider themselves Hindus. In the United Provinces the Census Superintendent reports that the present tendency among Jains is towards segregation from rather than amalgamation with Hindus and that intermarriage with Hindu families is becoming more unpopular, though there is less objection to taking Hindu wives than to giving brides to Hindu males. It was claimed by the Hindu Mahasabha that a few Buddhists adopted the same position as Jains who regard themselves as Hindus, but from Buddhists as well as Jains protests were received against the possibility of their being classified as Hindus. In order to get round the ambiguity it was also ordered that Buddhists might likewise describe themselves as Hindu, and the totals of Buddhists who so regard themselves will be found in footnotes in Table XVI. In all 12,326 out of a total for India of 1,252,631 Jains, and 70 Buddhists out of 12,786,831 described themselves as being Hindus, and of these 526 Jains and 25 Buddhists actually appear as Hindus in the statistical tables.

159. Some other schismatics have similarly an ambiguous position. In 1881 Kabirpanthi and Satnami were shown as religions separate from Hinduism. Since that year they have been incorporated with Hindus and on this occasion they Ambiguous Sects.

have been similarly treated except in Bombay where a few Kabirpanthis and Dadupanthis who did not return themselves as Hindu have been shown under "Others". It would be natural to suppose that the remaining religions might at any rate be regarded as quite distinct, yet while the border line between tribal religions and some aspects of Hinduism is not at all easy to draw, it is often just as hard to define it between Hinduism and Islam, and even between Hinduism and Christianity, in the case of a number of intermediate sects which offer points of identity with both.

Except for a body in Tinnevelly that claims to be both Jew and Christian, the Jews remain a much more clearly defined body, and in their case Hindu influence would seem to go no further than inducing the Beni-Israel to add a Hindu or a Hinduised second name to the Hebraic one, but the Indian Christians of South India go further. Caste is admittedly observed by Catholics*, while some Protestants who profess not to admit it do admit a ban on commensality. The Catholics appear to use caste marks in some cases, and there was a *cause célèbre* in the Madras courts in which an overzealous imported priest, who had destroyed as unchristian the wall which ran the length of the aisle to separate the caste from the outcaste Christians, was prosecuted by his flock in consequence. The Catholics, besides observing caste even to conventional privileges in dress and ornaments, use the *tali* instead of a ring in marriage and permit the retention of other customs, such as a tabu "for reasons of hygiene" on contacts with persons polluted by childbirth.

On the other hand certain features of the Lingayat belief seem to have been borrowed from Christianity, as a doctrine of immaculate conception and the practice of burying the dead. A forest tribe in North Kanara, now Hindu, has family names of Christian origin. In the case of Islam however the border line is much less definite. Even saints of Christianity, Islam and Judaism are themselves subject to some confusion. In the Near East Elijah, al-Khidr (The Green One) and St. George are confused or identified generally, while boys born on St. Demetrius' Day are called Kasim. Confusion of this kind is probably to be found among Indian outcastes such as Lalbegis, who have drawn on both Hindu and Muslim sources for their religious tenets, but it goes still further with the Chet-Rami sect of the Punjab, who worship the Christian Trinity plus a Hindu-Muslim trinity consisting of Allah the Creator, Parameshwar the Preserver, and Khuda the Destroyer. There is thus a very real difficulty sometimes in deciding whether a particular body is Muslim or Hindu, and since the census actually took place there have been some searchings of heart as to the Sathpantis, or Pirpantis, of Gujarat, Kachh and Khandesh. These people are Mathia Kunbis by caste, and an offshoot of the Leva Kunbis, and seem to have been returned at the census as Hindus; they are said to follow the Atharva Veda, which is perhaps more magical than religious, and they worship at the tombs of Muslim saints at Pirana and elsewhere, from which they get the alternative name for their sect, and they observe as their sacred book a collection of the precepts of Imam Shah, the Pir of Pirana; they observe the Ramazan, repeat the *kalima* and bury their dead with both Muslim and Hindu prayers. On the other hand they keep the *holi* and *diwali* and their marriages are conducted by Brahmans, so that they appear, on the whole, to be Hindus socially but rather Muslims by religion. This position is emphasized by the fact that while a religious authority, the Shankaracharya of the Sankeshwar and Karavir Maths, pronounces them to be without the pale of Hinduism, the Hindu Mahasabha, a frankly communal organisation, proclaims that they are within it. Another Hindu organisation has urged these Mathias to abandon the worship of Muslim saints, but in truth mere worship at the burial places of holy men is hardly a test of religion at all, since there are many shrines holy to more than one faith, and the holy ones of one religion often survive the superimposition of another and adapt themselves to the change as Badar Makan, the shrine of a Muslim pir in Chittagong, becomes Buddha Makan to an Arakan Buddhist. So in Paphos the Cypriot peasant worships even the Virgin Herself as Panhagia Aphroditessa. The truth is that the shrines of the dead are places impregnated with the fertilising soul-matter† of the departed great ones and the cult of them goes back to a totally pre-Hindu phase, which is still represented in the tribal religions, and appears in

* At the time of going to press a Catholic youth is reported to have started a fast to the death outside the residence of the Bishop of Trichinopoly to secure the removal of the iron railings which separate the caste from the outcaste Catholics in that bishoprick.

† See below page 409 for details of the Karen belief in which this idea is crystallized.

other practices of some Muslims, the implications of which have been forgotten though the practices remain, as in the use of tombstones of phallic design, which may be seen even in the Khyber Pass, for instance, while the Muslims of Malaya use stone ones of different but likewise significant designs for the different sexes. A case not unlike that of the Mathia Kunbis is to be seen in that of the Nayitas of Malwa who "share in equal degree the Muslim and Hindu religious beliefs", worshipping Ganesh as well as Allah, using Hindu names and dress and observing Hindu festivals. It may also be found in the Kuvachandas of Sind and again in the Hussaini Brahmans, who like the Mathias are more or less converted to Islam in faith but retain Brahmanical practices and claim to eat only with the Sayyids among Muslims. The Malkanas of the United Provinces are another somewhat similar group of Rajput, Jat and Bania origin observing both Hindu and Muslim ceremonies. Many became definitely Hindu as a result of the *shuddhi* movement and others returned themselves as Muslim at the census, but the bulk apparently continue to halt between two opinions, and in 1926 when the *shuddhi* and *tanzim* movements were at their height these Malkanas started taking money for conversion and it is said that many made considerable sums by conversion and reconversion to and from Hinduism, Islam and Christianity for which communal zealots were then at any rate able to find money. Bengal affords a number of instances of border line sects such as that of the Bhagwania or Satyadharma community, recruited from both Hindus and Muslims, though even within the sect there is no intermarriage, while the Nagarchis of Bakarganj, the Kirtanias of Pabna and Maimansingh and the Chitrakars or Patuas of West Bengal are in the nature of castes rather than sects, whose religion and customs have both Hindu and Muslim features as in the case of the Mathia Kunbis. A fresh movement aimed at the reconciliation of Hinduism and Islam was started during the decade under review by a man who claimed to be an incarnation of Channabasaveswara, but his teachings, though they gained some adherents, aroused much antagonism among the Virasaivas of Mysore State, where the movement started, and led to its suppression.

Another aspect of the confused border line between Islam and Hinduism is to be seen in the customs of the outcastes of the Punjab, where Chuhras for instance take Muslim names and even utilise the services of mullahs where they serve Muslim villages or wards, though in the eastern Punjab generally they follow Hindu customs and use Hindu names. Yet there is no such marked difference between one Chuhra and the other that a valid distinction between these two religions can be drawn in his case. At this census it has been left to each individual to return his religion as he thought fit and some Chuhras have returned Islam others Hinduism. Many again have described themselves as belonging to *Ad-dharm*, 'the original religion', probably without any clear idea of what that faith may be, but desiring merely to emphasize the distinction between themselves and caste Hindus without committing themselves to Islam or Christianity. Chuhras in the Punjab who returned their religion as "Chuhra" simply (and there were many) have been included with Hindus, following the precedent of the previous census, though it is a moot question whether they should not have been shown as Tribal, and it seems not impossible that they are by origin a degraded branch of the aboriginal tribe known in Gujarat as Chodhra.

Generally speaking, there would seem to be no insuperable reason why the Muslim and the Hindu should not dwell together in harmony, and there are Hindu temples in Madura and Tanjore which have hereditary Muslim trustees. At any rate the obstacle is probably less the divergence of religious belief than their reliance on different historical pasts. In the early glories of Hinduism and Buddhism, under rulers like Chandragupta and Asoka, Islam has no concern, and the great historic characters of the Muslims in India were mostly earth-seizing monarchs whose victories were over Hindus and whose culture was of external origin.

Interpretation of 'Hindu'.

160. Part of the difficulty of defining the term Hindu arises from the fact that it is as much a social as a religious term and really denotes membership of a system of organized society with great latitude of religious beliefs and practices, so that it is possible for a man to be a Hindu socially and to have a religious belief shared with others who do not regard themselves as members of the same society, a possibility illustrated by a tribal Korwa of the Central Provinces who said to his Census Superintendent "if we had plough cattle we should be Hindus". Conversely there is no compelling necessity that all others of his society should share his beliefs,

and the Census Superintendent of Mysore State, himself a Brahman, thus defines a Hindu :—

"What makes a man Hindu is the fact that he is an Indian by birth ; that he shares religious belief of a kind familiar to the majority of the people ; that he is a member of the social order accepted by that majority ; and that he worships one or other of the deities in the pantheon commonly accepted by that same majority."

This is a feature particularly associated with Hinduism but it is not exclusively confined to that religion, as at least one case arose of a Muslim who wished to be included with the social community of Islam but who returned his religion as Agnosticism. He appears to have been unique and his difficulty was evaded by showing him as a Muslim for all tables except that of religion, a position which recalls that of Maurice Barrès who said of himself "I am an atheist, but of course I am a Catholic", but the number of Hindus whose attitude to their community and their beliefs might be expressed in a somewhat similar paradox must be very large, and the cross division of religion and society is clearly going to create a difficult position for census operations in the future unless a return of "community" be substituted for that of religion and caste. Thus the Sahejdhari Sikhs who worship the ninth Guru but not the tenth, and who cut their hair instead of allowing it to grow, form a sect half-way between the Hindu and Sikh religions and for census purposes had to declare themselves to belong to one or to the other with the result that some are included in the Hindu and others in the Sikh total, but no substitute for "Hindu" as a religious term can be found, nor is it possible to disentangle its religious from its social significance. This is inherent in the history of Hindu society which has been formed by the accretion of a number of races within a polity indirectly hierarchical. It is probably significant that many an ignorant Hindu, if asked his religion, will not give "Hindu" as an answer but will give the name of his caste or of the particular sect to which he belongs. As far as Sikhs go, the criteria that separate them from Hindus are not very marked on the social side, whatever they may be doctrinally. The daughter of a Sikh ruler can marry a cadet of the house of Nepal, and Hindus can enter the Golden Temple of Amritsar which is normally barred to Muslims and Christians. Indeed there are apparently cases in which a father may bring up one son as a Hindu and another as a Sikh. The Sikhs in general, however, emphatically protest that they are not Hindus, in spite of the Hindu Mahasabha which says that they are, and this is particularly so in the case of the Akali Sikhs, who are mainstay of the Sikhs in the army, while the Sahejdhari Sikhs vote in Sikh constituencies in the Punjab on making a solemn affirmation that they are Sikhs.

Buddhists were claimed as Hindus by the Hindu Mahasabha with less justice than Sikhs, since Buddhism arose as a definite reaction against Hinduism, and considerations of politics have probably been allowed to bias the critical faculty in putting forward this claim, since it may be doubted whether even the Hindu Mahasabha would claim all Japanese Buddhists as Hindus. The common element in the two religions, and this is of course apparent, even to the parallel between the Indian *holi* and the chaster Burmese Water Carnival, is often derived from a more primitive religion, but to claim Buddhists as Hindus by religion appears to the disinterested just about as reasonable as it would be to claim Christians as Jews.

When they do not split away like the Sikhs, there seems to be a tendency for reforming elements in Hinduism to crystallize eventually into a closed caste. This has been the case with the Lingayats, who started as a reforming sect of Hindus founded by Basava in the twelfth century, with the Kabirpanthis and with others, the Vaisnava sect in Bengal for instance, and probably would have been the case with the Sikhs had they remained within the pale. In the case of the Brahmo and Arya Samajists, however, neither are closed but on the contrary recruit steadily from among Brahmanic Hindus ; nevertheless there appeared some tendency on the part of one section of the Arya Samaj to disclaim Hinduism at this census, though the schism between Aryas and orthodox Hindus is perhaps less marked on the whole than when the Arya movement started, which is perhaps due to a weakening of the strictly orthodox position. Of this 'weakening', if the term be permissible, the Census Superintendent of Cochin State writes, a little pessimistically perhaps, as follows :—

"Broadly speaking, a two-fold movement is discernible in this connection. Among those placed in the lower grades of Hindu society it is a movement for the purification and elevation of their religious rites and practices ; while those born in the higher grades reveal a

growing indifference in all matters connected with religion..... To the generality of English-educated persons—be it remembered in this connection that the caste Hindus have progressed much more than all others in English education—religion is now a matter of utter indifference or unconcern and its rites and practices a mass of superstition to be derided and condemned by all right-thinking people..... Apart from this, the attitude of a great majority of the English-educated young men of caste Hindu communities towards their religion is now one of veiled hostility because, in these days of communal demand for equal representation of all creeds and classes in the public service, they find that the unlucky accident of their birth within the Hindu fold is an almost impassable barrier against their entry in government or quasi-government service, the only career for which they are fit by training and temperament alike."

Jainism.

161. The Jains, as already pointed out, were claimed as Hindus with more reason, since some Jains do actually consider themselves to be Hindus, though their customs of succession and adoption are not the same as those in Hindu law. It seems probable indeed that this sect represents the continuity of an anti-Brahmanistic teaching which may trace its derivation to a pre-Vedic age and to opposition at the outset to the rise of Brahmanic Hinduism. It is not likely that Mahavira was regarded as the 23rd *tirthankara* gratuitously, in spite of his having been the first historical one of the series and the apparent founder of the religion. Moreover, this view of the Jain position would explain how it is that although the teaching of Mahavira was emphatically antivedic, the rules of Jain and of Brahmanic asceticism are almost identical, if the suggestion be accepted, that is, which is generally advanced here, that Brahmanic Hinduism was not an entirely new religion imported from outside by Indo-European invaders into a country peopled by darkskinned savages, but an indigenous growth produced by the impact of these invaders, having a religion akin to that of classical Greece and Rome, upon a pre-existing more civilized people with a religion drawn from Mesopotamia, Asia Minor or the eastern Mediterranean. It may be noted incidentally that such a hypothesis would do something towards reconciling the difficulty in that whereas the Jains describe the Tirthankara Parswa who preceded Mahavira as the son of a king Aswasena of Benares, no king of that name is known to Brahmanical literature except a king of the "Nagas". Professor Tucci's opinion that Jainism embodies a revival of very ancient rituals and forms "probably even pre-Aryan", goes to support the same view, and it cannot be denied that the nudity cult of the Digambar Jains is of great antiquity, much older than the familiar accounts of Megasthenes of the 3rd century B.C. This nudity cult still causes local sensations from time to time and some Jain *munis* were in April 1931 charged with indecency in the Court of the City Magistrate at Surat. The case was withdrawn on an understanding given by the Jains that such "sky-clad" ascetics should only move about in public surrounded by a discreet bodyguard. In May however in Dholpur State the appearance of sky-clad Jains in the village of Rajakhera, where the populace was less tolerant, gave rise to a serious riot. The Jain like the Hindu community is not unmoved by the spirit of reform, and opinion has run very high on the question of the initiation of minors as religious ascetics (*muni*), leading in Ahmadabad to blows between the two factions in July 1930 and to action by the Magistrate who had to take security against breaches of the peace in January 1931.

Reforming movements.

162. Some indications of a tendency to change and reform have appeared in the other important religious communities, even the Parsis having apparently experienced dissensions between the Shenshais and the Kadmis, and between the supporters and opponents of Bahaism, while as an instance of the change effected by modern means of transport it is interesting to note that the holy fire for a Parsi temple at Allahabad was brought from Bombay in a specially consecrated motor lorry in which the sacred fire was fed with sandalwood by a priest. In Islam an attack by the Ahl-i-Hadis sect on the Hanafi sect resulted in a criminal prosecution, and the Dawudi Borah sect was divided by a *fatwa* which excommunicated those members of the society who might forbear to wear beards. The insignificance however of dissensions of this kind serves merely to emphasize the general unity of the community as a whole, and the Christian communities of India, who, Roman Catholics apart, show sects as multifarious as those of Hinduism, have made a notable movement towards unity in the attempt, partially if not completely successful, to unite the Wesleyan, Congregational and Presbyterian communities into a United Church, or rather into two united churches, those of Southern and Northern India respectively. It was hoped that the figures of Christian sects would be available to show the extent and effect of this unifying movement from which certain sections of those three bodies withheld themselves, but unfortunately the necessity

for economy at the abstraction stage prohibited the necessary sort being made Similarly separate figures are not available for the Anglican Communion, the form under which were returned members of the Church of England and of the newly established independent branch of that community in India. The disestablishment of the Anglican Church in India, which will in future be independent of the State, as well as of the ecclesiastical control of the Church of England, and will receive no aid from Government as in the past, is too recent for its consequences to be foreseen, but it is possible that it will seek to unite with the other united Protestant communities, while it is also not unlikely that its sympathies politically will be definitely nationalist. Among Catholics exception was taken to the separate return of Catholics of the Chaldaean and of the Latin rite. As it was impossible to include the Catholics of the Chaldaean rite among Roman Catholics generally and also to show them as Syrian Christians, and as from their history and traditions the Syrians as a whole form a striking and important community in Southern India, where they have been established as long as Christianity has in most parts of Europe, and have quite as much right to be regarded as an indigenous religious body as have Muslims and Parsis, the Catholics of Chaldaean rites were shown as a separate unit, other Syrians being taken together like the Protestants. These other Syrians include Nestorians, whose numbers have been much depleted by secessions to the Jacobites and to Rome; Jacobites, who form the next largest Syrian body to Romans of the Chaldaean rite; Reformed or Mar Thoma Syrians, and a small schismatic body known as Yuyomayam. The Jacobite community has been rent since 1910 by a schism resulting from the excommunication by the Patriarch of Antioch of the Jacobite metropolitan Mar Dionysius, who refused to recognise the decree or to surrender his temporalities or to submit to the findings of the secular court, which in turn adjudicated on the case. About the time the census was taken the Patriarch came to India and the good offices of Lord Irwin were obtained and the decree of excommunication was revoked and a synod was called to arrange for a reconciliation of the divisions which the schism had caused. The Catholics of Chaldaean rites have had Indian bishops from their own community since 1896, but during the decade preceding this census the first Indian bishop of Latin rites was also appointed (1923). There is also now an Indian bishop of the American Episcopal Methodist Church. The part played by the Indian Christians in the nationalist movement is not without importance, and it is during the past decade that their attitude has tended to change from that of a separatist minority towards co-operation with the moderate nationalists, a change expressed by the formation of a Christian Nationalist Party in Bombay.

Pilgrimages.

163. One difficulty which was little felt at this census as compared with some previous ones was the temporary displacement of population by great pilgrimages. Religious pilgrimages play a greater feature in Indian life than in the life of any other nation, though they have always been popular on the shores of the Mediterranean. Even the very ancient pilgrimages to St. James of Compostella however and the modern ones to the grotto of Lourdes are probably insignificant compared to such assemblies as the Kumbh *mela* at Allahabad, which occurred fortunately in 1930 and not in 1931. This pilgrimage habit, for in India it is nothing less, appears to be maintained by regular and hereditary canvassers attached to different shrines who go round the country inducing villagers to leave everything and embark, sometimes with their families as well, on visits to distant shrines and tours of holy places which may even take years to accomplish. The shrines undoubtedly benefit, but it is impossible not to speculate as to whether the moral or physical benefit of the pilgrim is proportionate to the loss in time, in labour and in expense, though the justice of such a materialistic reflection is perhaps questionable when made by one who has not himself experienced the religious emotion inspired in the pilgrims. Canvassing, however, is not always needed to start a pilgrimage. In February 1930 the gas generated by night-soil in a trenching-ground near Delhi issued from the earth in flame, and the spot promptly became the scene of a local pilgrimage to the goddess-favoured site, large numbers of people of the more ignorant classes coming and removing mephitic earth from the empyreumatic spot hallowed, as some said, by the goddess of small-pox. The goddess in this case proved obligingly susceptible of chemical analysis, which showed that her ambrosial composition was 70 per cent. methane, 20 per cent. carbon-dioxide and 10 per cent. inert gases.

Propaganda.

164. If, however, the census was untroubled by pilgrimages or great fairs it had other troubles to meet from religious sentiment to which allusion has already

been made. There was the energetic propaganda by the Hindu Mahasabha which practically amounted to an advocacy of returning as Hindu every person whose religion could not be found to have been originated outside India, that is practically every one but Muslims, Christians, Parsis and Jews, regardless of whether the followers of other Indian religions wished to be returned as Hindu or not, and equally regardless of the facts of the case. They also proposed to include as Hindus all persons of doubtful position half-way between Hinduism and Islam, without insisting on the *shuddhi* ceremony. In the fear apparently that the depressed classes would not be returned as Hindus attempts were also made to minimise their numbers, though it is only fair to say that the depressed classes organizations were not behind hand in claiming as "depressed" a number of castes almost certainly not in that category. Non-Hindu hill tribes such as the Khasi of Assam were claimed as Hindus, though one Assam paper naively distinguished between '*kutcha*' and '*pucca*' Hindus, while a proposal was actually mooted by certain members of the Central Legislature that wherever the majority of the members of a hill tribe had been Hinduised, the complete tribe should be shown as Hindu. It was not suggested that where a minority were Hindu the whole tribe should be returned as Tribal, though this may of course have been implied. The Census Superintendent for Bombay regards the figure of Tribal Religions for that province (155,038) as "grossly understated" and thus accounts for their deficiency :

"Whenever an individual disclaims membership of any recognised religion, the tendency is to enter Hindu without further enquiry, more particularly if the individual in question is undoubtedly a member of a tribe, long established in the locality. The process of thought is something as follows :—This land is called Hindustan and is the country of the Hindus, and all who live in it must be Hindus unless they definitely claim another recognised religion. This attitude pervades all grades of Hindu Society and I have been questioned on this basis, as to the propriety of the instructions issued, by many Hindus, including Government officers, who possessed the qualification of B.A. and who held the rank of Mamlatdar. Though they submitted to the orders given, there is little doubt that these orders were not passed on in their entirety and with the clarity necessary to impress them upon all Enumerators..... It is certain that the very vast bulk of the Bhils, Katkaris and Thakurs in this Presidency are not Hindus. It cannot also be denied that Bhils and Thakurs, living in isolated groups in Hindu villages are gradually yielding to the influence of association and conforming to the rites of Hindu worship as practised locally but in the absence of adequate data it is impossible to compute the number of persons who have abandoned their primitive beliefs and adopted Hinduism in their place. My personal view is that the process of assimilation is very slow, much slower than is commonly believed to be the case, even in areas where individual members of the Aboriginal Tribes have descended into the plains and are brought into contact with all the influence of village life."

What took place in Assam is typical and it is simplest to quote the Census Superintendent himself :

"Just before the census I received several petitions from Kacharis in Kamrup stating that they had been returned as Hindus in the census schedules and that they objected to the action of the enumerators recording their religion as Hindu. The Census Officer in forwarding the petitions noted as follows and I think his note sums up exactly what went on in most districts of the Assam Valley :— 'It is true to some extent that due to propaganda by the Hindu Sabha some of the Kacharis have willingly allowed themselves to be recorded as Hindu by religion ; in some cases some of the enumerators have persuaded them to have themselves recorded as such ; and in some cases some of the enumerators have recorded them as such of their own accord, they being ignorant of what was recorded of them '."

The Census Superintendent continues :

"The propaganda work of the Hindu Mission was certainly a great success in Assam from their point of view and had an enormous influence on the tribal peoples hovering in the borderland between Hinduism and Animism..... some Lalungs came to see me in Nowgong in January 1930 and asked my advice as to how they should return their religion. I questioned them about their religion, ascertained that it was purely a tribal one and advised them to tell the truth. A meeting of Lalungs was subsequently held and a resolution was passed that the Lalung community should return their religion as Lalung. In spite, however, of this resolution the vast majority of Lalungs returned themselves as Hindus, in many cases, I have no doubt, voluntarily. But there can be no doubt that many enumerators under the influence of the propaganda entered Hindu against the names of tribal persons who found it difficult to state precisely what their religion was and if there was any doubt Hinduism got the benefit of it ..... In Darrang.....the Deputy Commissioner reports that..... he had good reason to suspect a Charge Superintendent—a Government officer—of using his influence to get Animist Kacharis returned as Hindus."

In another passage the Census Superintendent remarks that attempts were made to return as Hindus even the Naga and Kuki tribes of the North Cachar Hills, and he quotes as follows from the Deputy Commissioner of Darrang District :—

"The Hindu enumerator (and they are nearly all Hindus) tends to record all animistic and aboriginal tribes, such as Kacharis, Mikirs, Mundas and Santhals, as Hindus. Even if the enumerator fails, the supervisor or checking officer tends to keep him up to the scratch. An instance was brought to my notice at Halem where the enumerator had written Miri, but the checking officer changed it to 'Hindu Miri'. There is no remedy though I have done what I can; the enumerator, if questioned, says that they say they are Hindus. In the great majority of cases I do not imagine they do say so. Those I have asked say (in the great majority of cases) that they are, *e.g.*, of the 'Miri' religion. The net result must be that the religion statistics collected at this census will be very inaccurate in areas where there are animistic or aboriginal tribes."

Agitation among the Gonds and Oraons resulted in a large number, who were returned as Tribal in 1921, particularly of the former, returning themselves or being returned as Hindus, though their Hinduism in parts of the areas concerned is highly problematical. In the case of the Gonds in Berar alone these rather dubious Hindus numbered over 100,000, and in the Central Provinces and Berar together they amounted to more than three lakhs. In India as a whole the tribesmen who changed from Tribal religions to Hinduism numbered a million and a half.* In Gwalior State over 14,000 Bhils in the remoter forests and hills, whose tribal name was returned as their religion, were classified notwithstanding as "Hinduized Tribal" and included in the total of Hindus, involving a total transfer from "Tribal" in 1921 to "Hindu" in 1931 of some 162,000 Bhils. In Cochin State some 5,000 hill or forest tribesmen were classified as 'Hindu' though very doubtfully conforming to such a description, and a similar procedure has probably been followed elsewhere. On the other hand again counter-agitation in the Punjab against being returned as Hindu led 400,000 of the depressed castes to return themselves as *Ad-Dharmi*, i.e., "of the original faith", as distinct from the terms used by their congeners of other provinces in northern India—*Adi-Hindu*, an expression which allowed of their inclusion in the total of Hindus, correctly of course, since in spite of their disabilities they are Hindu by religion, and if not, would not agitate for admission to Hindu temples†. Feeling on the subject of the return of religion ran highest in the Punjab, where many attempts were made to weight the census. False statements were circulated probably to arouse enthusiasm, such as a *canard* that all the sweepers of Simla had been returned as Muslims, which was published as a fact before even the preliminary enumeration of Simla had begun. A good deal of heat was similarly engendered on the question of the Udasi Sadhus. Members of this sect at one time regarded themselves generally as Sikhs, but since then they have reverted to the original fold and are now Hindus. Unfortunately an obsolete direction was reproduced in the Punjab Census Code from 1921 directing the inclusion of Udasis as Sikhs in the absence of information to the contrary. This was at once withdrawn when the circumstances were made clear. A great deal of misunderstanding was also aroused by the provision in the Code that Aryas and Brahmos should not be entered in the schedule as Hindu. This provision is an old one and is merely intended to facilitate the sorting of the Brahmo and Arya slips, but it was assumed by uninstructed persons who obtained access to the Code that the provision was intended to exclude Brahmos and Aryas from the Hindu total, which was not of course the case.

In Bengal even compilation was subject to propaganda and in one sorting office it was discovered that payment had been made for copying slips for fictitious Hindus while 74 Muslims were converted to Hinduism during the slip copying process. The insignificance of the numbers involved and the fact that the chicanery was detected and corrected is rather a testimony to the general accuracy of compilation than otherwise.

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* Some figures of the turnover are as follows :—

Cochin State	5,000
Gwalior	162,000
Rajputana	252,000
Central Provinces	145,000
Assam Valley	350,000
Total	914,000

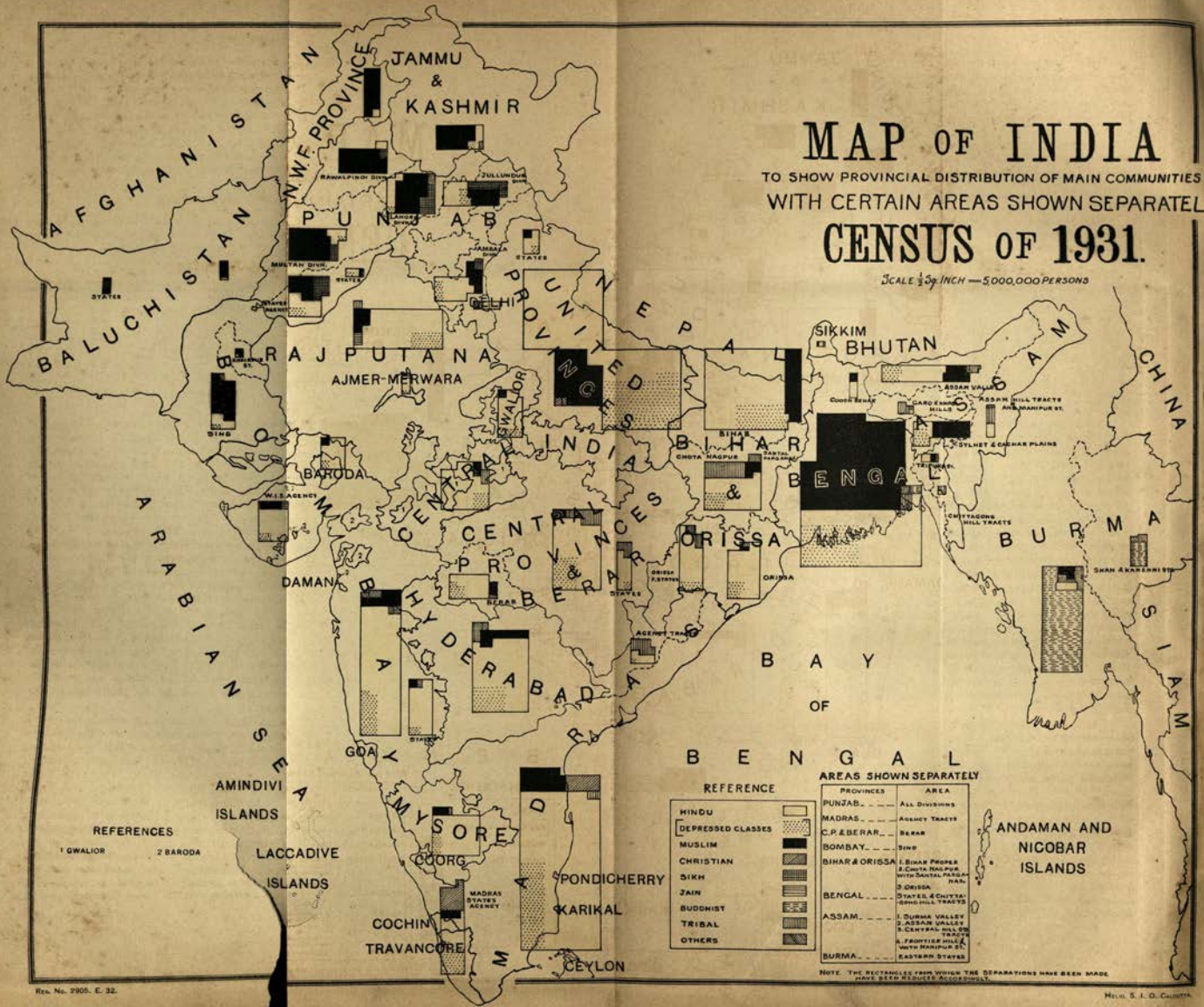
† In the social map these *Ad-dharmis* have been shown in pale blue amalgamating them with the other depressed castes.

MAP OF INDIA

TO SHOW PROVINCIAL DISTRIBUTION OF MAIN COMMUNITIES
WITH CERTAIN AREAS SHOWN SEPARATELY

CENSUS OF 1931.

SCALE ½ SQ. INCH — 5,000,000 PERSONS



Reg. No. 2905. E. 32.

Helio. S. I. O. Calcutta.

Other communities showed no particular reluctance to act on lines similar to those of the Mahasabha, and in the Punjab in particular attempts made by Hindus, Sikhs and Muslims alike to bully the depressed castes into returning themselves as the canvassers desired probably left little to choose between them; reports from the Punjab indicate that if any discrimination can be made the Sikhs were the most and the Muslims the least active of the three in this respect. Ultimately the depressed classes were so harassed that they made a big demonstration in Lahore, insisting on being returned under their own religious designation of *Ad-dharmi*. As they denied that they were Hindus it was necessary to show them separately.

Section ii.—The figures.

165. The figures for Religion will be found in Table XVI in part ii of this volume and comparative and proportional figures in the subsidiary tables at the end of this chapter; for convenience an abstraction is given below :— **Hindus.**

Religion.	Actual Number in 1931 (000's omitted).	Proportion per 10,000 of population in						Variation per cent (Increase+) (Decrease—)					
		1931.	1921.	1911.	1901.	1891.	1881.	1921-1931.	1911-1921.	1901-1911.	1891-1901.	1881-1891.	1881-1931.
Hindu	239,195	6,824	6,856	6,939	7,037	7,232	7,432	+10·4	—0·4	+5·0	—0·3	+10·1	+26·8
Jain	1,252	36	37	40	45	49	48	+6·2	—5·6	—6·4	—5·8	+15·9	+2·5
Buddhist	12,787	365	366	342	322	248	135	+10·5	+7·9	+13·1	+32·9	+108·6	+274·1
Sikh	4,336	124	103	96	75	67	73	+33·9	+7·4	+37·3	+15·1	+2·9	+133·9
Zoroastrian ..	110	3	3	3	3	3	3	+7·8	+1·7	+6·3	+4·7	+5·3	+28·5
Muslim	77,678	2,216	2,174	2,126	2,122	1,996	1,974	+13·0	+5·1	+6·7	+8·9	+14·3	+55·0
Christian	6,297	179	150	124	99	79	73	+32·5	+22·6	+32·6	+28·0	+22·6	+238·1
Jew	24	1	1	1	1	1	1	+10·9	+3·8	+15·1	+6·0	+43·1	+101·0
Tribal	8,280	236	309	328	292	323	259	—15·3	—5·1	+19·9	—7·5	+41·2	+28·8
Minor religions and religions not returned.	571	16	1	1	4	2	2	+3072·6	—51·5	—71·4	+203·7	—28·7	+179·3

The Hindu population has increased during the decade by 10·4% to a total of 239,195,140. The composition of this total will appear from the accompanying table, in which the figures for "Other Hindus" contain the sum of those who returned their religion as Adi-Hindu, Adi-Dravida and Adi-Karnataka, together with certain sects such as that of the Dev Samaj for which separate figures are shown in some provinces. The depressed castes who returned themselves as Ad-Dharmi in the Punjab (except for 7,287 who returned themselves as "Hindu Ad-Dharmi" and are included accordingly as 'Other Hindus') have been included under the head "Others", and not as Hindus since they objected to being so included, and though their religion does not seem to differ from that of Adi-Hindus in any way, and it would seem proper to have included them in the Hindu total, the only position which is possible to the census is to accept the individual's own statement of his religion provided it can be classified under one of the standard heads, and the return of Ad-Dharm has therefore been included with "Others". The numbers were 399,307. Had this group been added to the Hindu total, the percentage of increase would have been raised by an additional 0·2. The difference which would have been made in the Punjab by the inclusion of Ad-Dharmis as Hindus would have been to transform the decrease of —3·81%, which the Hindus of that province suffered, into an increase of 2·3%. Even so the figure is low as compared to the 16·5% increase of Muslims and 34% of Sikhs in that province; these figures relate to British Districts, but the figures for the states and for the Punjab States Agency are not dissimilar.

The increase under the head of Brahmanic Hindus is not entirely the result of the normal propagation of the species. Apart from conversion or rather perhaps reconversion (*shuddhi*) of a certain number of Muslims and Christians, the numbers have been increased by large adhesions to Hinduism of hill and forest tribesmen. Reference has already been made to Gonds, Oraons and Bhils. The organ of the Hindu Mission claims 62,844 converts from Muslims, Christians and Tribal Religions for the year 1927-28 alone, and having stated that the Mission commenced work in 1926 "in order to stem the tide of conversion to Christianity" goes on to say "In 1930 a large number of our workers carried an intensive propaganda for several months before the census operation. We.....were convinced of a substantial increase of Hindu population in these provinces (Assam, Bengal and Bihar) in consequence of the absorption of Animists". The conviction was well founded, as Tribal religions in Assam show a decrease of 280,000, as compared to an increase in Christians of 117,000, and a reference to the Assam Census Report will

show how large the turnover from 'Tribal' to 'Hindu' in the return of religion for some of the plains tribes in that province. The table (see below paragraph 173, *Tribal*) hardly shows complete figures for the change, as it can only give the numbers of those tribes which returned their tribe in column 8 of the schedule, and there were certainly many Christians who did not do so and probably appreciable numbers of Hindus. On the other hand against the increase from these sources must be set off some decrease due to defection from orthodox Hinduism to the Arya or Brahmo Samaj, though the total figure of Hindus is not thereby affected, to the exclusion of the Ad-Dharmis already explained, and perhaps in some small degree to the conversion of the depressed castes and others to Islam or Christianity. It should be pointed out that the term Brahmanic as used at this and past censuses includes not only Sanatanists and orthodox Hindus of recognised Hindu sects but also many, such as Lingayats, Kabirpanthis or the Jugi caste of Assam, who do not recognise Brahmanic authority.

Similarly the increase of Aryas is to be attributed to the adhesion of "Brahmanic" Hindus drawn very largely but by no means entirely from the lower ranks of Hindu society, which find in the Arya Samaj an opportunity of rising socially without abandoning Hinduism, since the Arya Samaj does not attach that importance to caste which is characteristic of orthodox Brâhmanism. This reason was given for the increase of Aryas in Kashmir from 1,000 in 1911 to 23,000 in 1921, their present figures being 94,000. The Arya Samaj has been the most active of the Hindu proselytising bodies, and the All-India Shuddhi Conference, meeting under its auspices at the Kumbh Mela of 1930 at Allahabad, propounded (if correctly reported) the amazing proposition that "it is an undisputed fact that the founders of all the religions of the world were either Hindus or their descendants who drifted away from the present body", and it appealed for the reconversion of their followers in the interests of the future progress of mankind.

The Brahmo Samaj is a more eclectic body with a better claim to provide a catholic religion in that it does not insist on the infallibility of the Vedas, but inculcates the worship of one God, Creator and Preserver, who punishes sin remedially and is to be served in prayer and moral conduct, a belief in the immortality of the soul, and the view that no prophet, and no scriptures of any religion are finally and exclusively authoritative. It is probable that the very broadness of this creed militates against its appeal to any but the most intellectual classes, and though there are a number of Brahmo missions the increase by conversion is very much less numerically than that effected by the Arya Samaj. Its position in Hinduism both religiously and socially offers a near parallel to that of the Unitarians in Christianity in Britain.

Sikhs.

166. The increase of 33·9% under this head cannot be regarded as an entirely natural increase of population. Allowance must be made for a considerable amount of conversion from Hinduism not only in the Mazhbi section of the community, which is recruited from rather a different class than the rest, but in Sikhs proper by adhesion from Hindi-speaking castes, such as Jats and Aroras, even in the eastern part of the Punjab. This conversion seems to have been partly due to the impression that there was something to be gained by belonging to a community comparatively speaking little represented in Government services, and cases are actually reported in which some sons are brought up as Hindus and others as Sikhs so as to better the opportunities of the family as a whole in the search for posts under Government. How far the figures given represent a complete return of Sikhs it is not easy to say, as it is not known whether the Sahejdhari Sikhs generally returned themselves as Sikhs or Hindus. The orders given to enumerators were that a return of "Sikh, Hindu" would not be accepted, and that the person enumerated must decide in which body he would be returned. The probability is that the bulk of the Sahejdhari Sikhs returned themselves as Hindus in Baluchistan and in the N.-W. F. P. but it is doubtful if such is the case in the Punjab where the Sahejdhari is recognised as a Sikh for electoral purposes if he desires to be so regarded. The figures of Sikhs in Sind show a remarkable fluctuation from census to census, largely on account of the varying classification of the Sahejdhari. Thus in 1881, 127,000 Sikhs were censused in Sind, in 1891 under a thousand, in 1901

Census year.	Actual number of Sikhs.	Increase per cent. since 1881.
1881	1,853,426	..
1891	1,907,833	2·9
1901	2,195,339	18·4
1911	3,014,466	62·6
1921	3,238,803	74·7
1931	4,335,771	133·9

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none, in 1911 about 11,000, in 1921 about 7,000 and in 1931 18,500. The decennial increase in the number of Sikhs is shown in the marginal table above. Their fertility is probably higher than that of Hindus on account of later marriage and the free remarriage of widows. The great bulk of the Sikhs shown as such in the census reports belong to the Keshadhari or Akali division which outnumbered those Sahejdhari who returned themselves as Sikhs in 1921 by about 1,200%. A noticeable feature in connection with the Sikhs is their appreciable increase in centres distant from the Punjab, to which they migrate largely for the sake of employment as mechanics. The phenomenal increase of over 30% in the Punjab itself, must be largely ascribed to the inclusion by conversion of Hindu castes.

Jains.

167. The Jain community is gradually decreasing in number proportionately to the population of the country as a whole. This is probably due in part to the practice of child marriage and the prohibition of widow remarriage, and partly also to the small size of the community which, attracting as it does no adherents from outside, cannot increase at the same rate as much larger ones. Dr. Guha suggests with some force that the Jains have a lowered fertility and an increased infant mortality rate on account of their division into small endogamous groups, some of which in Ahmadabad do not exceed 500 souls. The percentage of increase among Jains at this census was 6·2 and the Jain community now stands at 0·36% of the population of India instead of the 0·37% of last census and the 0·49% of 1891. 11,800 out of 1,252,105 Jains returned themselves as also Hindu, while the category 'Hindu, Others' includes 526 in the Punjab who returned themselves as also Jain.

Buddhists.

168. Contrariwise to the Jains the population of Buddhists to the rest of the population has steadily gone up with the increasing population of Burma, where 96·6% of the Buddhists recorded at this census are found. The great bulk of these are Burmans; Shans, Karens and Talaings making up about one-fifth to a quarter between them. In India the bulk of the Buddhists are found in Sikkim and the adjoining hills. There are a few in Assam, the descendants either of ancient immigrants from Burma *via* the Hukong valley or of isolated parties left behind by the army of invasion in the early 19th century. A few Sinhalese Buddhists are reported from Cochin State but most of the Buddhists there are educated Malayali Iruvas who have abandoned Hinduism on account of their social disabilities in that community. A colony of Buddhists in Chittagong, however, claims to represent the ancient Buddhist population of Maghada, and to be distinct from the Buddhists of the adjoining Hill Tracts, whose origin is Talaing or Arakanese, and from the Maghs of Chittagong whose religion has also been brought from Burma. Of Indian Buddhists 45 returned themselves as also Hindu, while 25 Buddhists in the Punjab who returned themselves as Hindu first and Buddhist afterwards are included under the head of 'Other Hindus'.

Distribution of Buddhists.

Province or State.	1931.	1921.
1. Burma	12,348,037	11,201,943
2. Bengal	316,031	265,604
3. Kashmir	38,724	37,685
4. Sikkim	35,412	26,788
5. Assam	14,955	13,162
6. Bengal States ..	14,532	10,155
7. Rest of India ..	19,115	15,931

Zoroastrians.

169. In spite of pressing invitations to return to Persia, which the Parsis have shown little inclination to accept, the Parsis have increased by 7·8% during the decade. Of the total number of 109,752, 99,010 are found in Bombay province, in Baroda, and the states of Western India. It was pointed out at last census that the birth rate was very low among Parsis, though the survival rate was exceptionally high. Both phenomena are due primarily to the high economic and cultural condition of the community, prosperity with education being the only really efficient check on the birth-rate yet discovered. So severely did this check operate by 1921, that in that year the birth-rate was lower even than in France. Like the Jains the Parsis are declining in numbers proportionately to the population as a whole, and it is possible that in their case also fertility may be lowered by too much inbreeding.

Population of Parsis.

Province or State.	Total number of Parsis.	Percentage of total Parsis.	Percentage of provincial population.
Bombay Presidency ..	89,544	81·6	·41
Baroda	7,127	6·5	·29
Bombay States ..	1,468	1·3	·03
Western India States Agency.	871	0·8	·02
Rest of India ..	10,742	9·8	.003

Jews.

170. As in the case of the Parsis, the Jews (Beni-Israel they are called in Bombay) are practically a closed body and receive no addition by conversion. Their increase from 21,778 to 24,141 (10·9%) shows that unlike the Parsis they are not losing in numbers proportionately to the rest of the population of India. The bulk of them are found in Bombay Presidency and in Cochin, being divided in both cases into "Black" and "White" Jews, though there appears to be no tradition of any connection between the Bombay and Cochin colonies, which are of very great antiquity.

Jews.

Province or State.	Total No. of Jews.	Percentage of total Jews.	Percentage of local population.
Bombay Presidency ..	17,739	73·5	·08
Cochin	1,451	6·0	·12
Rest of India ..	4,951	20·5	·002

Muslims.

171. Probably owing to the practices of polygyny, of widow remarriage and on the whole, of later consummation of marriage than is the prevailing practice among most Hindus, the Muslims are at present increasing at a greater rate. Some of the increase may be attributed to the *tanzim* movement for conversion to Islam, which naturally sprang up in reply to *shuddhi*, but it is believed that the increase attributable to this cause is not appreciable. The movement was primarily directed to the reconversion of the *shuddhi* converts and met with some success in the Agra and Mathura districts. Possibly the more rapid rate of increase may account to some extent for the lower level of intellectual attainment on the part of the Muslim population, but this would appear to be contradicted by the much more rapid increase of Sikhs. It is however to be borne in mind that comparison in the rates of increase between groups of very different size are apt to be fallacious and it is not to be expected that taking India as a whole the Hindus who form such a large majority should increase on the same scale as smaller units, limited as in the case of the Sikhs for instance, almost to a single area. Figures of the principal Muslim sects are not available as some local Governments decided to ignore these divisions, and others took cognizance of Sunni and Shia only, ignoring smaller bodies such as the Ahmadiya, Ahl-i-Hadis and Dawudi. It is noticeable that in most provinces the rate of increase of Muslims is decidedly higher than that of Hindus, though this is most markedly so in the Punjab. On the other hand in Bengal, where in the previous decade the Muslim population showed an increase of 5·2% against a Hindu decrease of 0·7, the Hindus at this census show an increase much nearer to that of the Muslims in rate, though still behind. Hindus have increased by 6·7% as against the Muslims 9·1%. If adults only be regarded, the comparative figures of Muslims to Hindus are lower, the higher fertility ratio rather naturally being accompanied by a higher rate of immature mortality. In the Punjab, on the other hand the respective ratios of Muslims, Hindus and Sikhs are very much the same whether the total population be considered or the adult population only.

Muslims, 1881—1931.

Province, etc.	Variation % 1921-1931.	Variation % 1881—1931.
India	+13·0	+55·0
British provinces ..	+12·7	+48·5
Ajmer-Merwara ..	—4·6	+68·0
Assam	+25·1	+109·3
Baluchistan ..	+10·4	..
Bengal	+9·1	+46·3
Bihar and Orissa ..	+15·6	
Bombay	+16·7	+47·5
Burma	+16·8	+246·3
C. P. & Berar	+21·2	+47·4
Coorg	+5·8	+9·9
Madras	+16·4	+71·0
Delhi	+46·0	+49·8
Punjab	+16·5	
N.-W. F. Province ..	+8·0	
United Provinces ..	+10·8	+21.3
States and Agencies ..	+14·7	+113·4

Comparative figures of Hindus and Muslims in Bengal.

British districts.	All ages.	Percentage of total.	Adults only (aged 20 and over).	Percentage of total.
Total population of Bengal.	50,114,002	100	24,873,309	100
Muslims ..	27,497,624	55	12,855,470	52
Hindus ..	21,570,407	43	11,503,668	46

Christians.

172. The increase under the head of Christian is of course largely due to conversion which causes a steady transfer to Christianity from the depressed classes and still more, except in Madras, from the hill and forest tribes. If the natural increase be 12%, then over 20% out of the total increase of 32·5% must be due to conversion. Figures for the different denominations of Protestants and of Syrians other than Catholics are not available except for certain areas, and in any case those of Protestant sects would have been much confused by the cross divisions of

Presbyterians and others who have for certain purposes combined as a United Church, but some of whom returned their unitary designation only while others returned only their sectarian one. Of the Christians returned from the whole of India about 2·7% are Europeans, 2·2% are Anglo-Indians and the remainder, at any rate for all practical purposes, are Indians. Unitarians, who were returned in 1921 under 'Indefinite Beliefs' have been included as Protestants on this occasion. Their position among Christian sects is somewhat analogous to that of the Brahmos in Hinduism, appealing likewise to a limited intellectual group of the upper and middle classes, though there is in Assam an Unitarian mission which claims a number of converts in the Khasi Hills.

Tribal Religions.

173. The figures of Tribal religions show a decrease of 15·3% since 1921, this figure being primarily due to losses by conversion to Hinduism or Christianity. In the case of the latter, typical figures are afforded by the Assam Hill Tribes in districts in which conversion to Hinduism has been inoperative. Thus in the Naga Hills and in the hill areas of the Manipur State the variation in Christians has been +162% and +157% respectively compared to +2% and + 17% on the part of tribal religions. As an instance of loss by conversion to Hinduism the most outstanding cases are those of Assam again and of the Central Provinces. In Assam the census superintendent attributes 350,000, that is half the increase of Hindus in the Assam valley, to accretions from Tribal religions. In the Central Provinces the turnover from Tribal to Hinduism and Christianity, but mainly to Hinduism, in various parts of the province is shown in the marginal table, and these, of course are only the actual figures by which adherents of tribal religion have decreased as compared with 1921, making no allowance for the actual increase of population which might have been anticipated in tribal religions. In Rajputana the Tribal religions have lost at least 250,000 to Hinduism. So again in Gwalior State the figures under Tribal Religion in 1921 were 161,629, and this time are shown as *nil*, a mere 14,291, who are specifically stated to have returned the name of their tribe as that of their religion, being returned in spite of that as Hinduized Tribes. Clearly it is most unlikely that the change has been as complete as all this, when Bhils who are not Hindu are found living even in mixed villages in Rajputana, and there has probably been arbitrary classification of Tribal religion as Hindu. The figures given in the margin cannot be regarded as complete since many missionaries objected to their converts recording their tribe in column 8 of the Schedule and instructed them to return "Indian Christian" thus depriving the census of real figures of the tribe. The numbers of Tribal religion have also suffered depletion owing to the decay, which attacks so many primitive tribes when brought into contact with civilisation. Thus the Andamanese have declined from 1882 in 1901 to 460 in 1931, a loss of 75·6% in 30 years, at which rate they will be virtually extinct by the end of the century. This aspect of tribal figures may be examined in Table XVIII and with reference to appendix II to this volume.

Jubbulpore	41,000
Nagpur	42,000
Bhandara	36,000
Raipur	41,000
Drug	63,000
Berar	112,000

Tribe.	1931.				1921.	
	Total.	Hindu.	Muslim.	Christian.	Total.	Hindu.
Bhil	2,013,177	1,569,365	8,332	133	1,795,808	968,199
Birhor	2,350	1,723	..	1	..	..
Gadaba ..	47,154	281	..	3	..	..
Garo	231,701	44,013	..	29,490	161,915	3,422
Gond	3,069,069	1,627,491	4	35	2,902,592	1,026,707
Ho	523,184	129,680	..	2,078	440,174	49,530
Kachari.. ..	345,248	259,283	..	8,808	207,266	71,192
Korku	194,433	107,018	..	16	140,440	46,553
Korwa	40,101	20,854	..	71	..	..
Lushei	117,569	1,742	..	61,654	61,090	195
Miri	85,038	79,848	..	38	68,725	45,424
Munda	658,450	226,883	..	136,763	593,839	236,833
Oraon	1,021,355	413,889	..	200,509	765,680	202,400
Santals	2,508,789	1,020,001	..	24,033	2,265,282	739,976

Others.

174. The head 'others' includes the comparatively insignificant number of persons who return themselves as deists, agnostics, free thinkers, rationalists, theosophists, Christian Scientists, etc., those eccentrics who made such returns of religion as "*Ahimsa*", "Truth", "Reason" and "Freedom for India" (one of them described himself as "spiritually universal", but manifestly could not be

distributed to all the various heads), and those who returned themselves as having no religion or who merely failed from indifference, or from inability to express themselves, to make any return of religion at all. It includes Confucians, a term used indiscriminately by census officers in India for any Chinese and usually rendered by enumerators and compilers, perhaps not inaptly, "Confusionist", and also a number of Chinese ancestor-worshippers returned as Animists (*i.e.*, *Nat* worshippers) from Burma. It also includes 418,789 Ad-Dharmis who objected to being described as Hindus, an objection which they continued to reiterate during the compilation stage of the census. The followers, some thousands in number, of a prophet, or a rogue, named Pao Chin Hao, who has recently arisen in the Chin Hills in Burma and started a new religion, which includes an inspired script and one or two most engaging features, such as the institution of religious police whose business it is to arrest diseases, were included among 'Animists' in the Burma returns and their numbers are not accurately known; a brief notice of this creed will be found in the appendix volume.

Comparative numbers.

175. The following table shows the relative proportions of the various religious communities in 1931 as compared to 1921 throughout India. Their comparative proportions since 1891 will be found in subsidiary Table I to this chapter. It brings out very clearly the extent to which the Hindu community is indebted to accretion from tribal religions for its growth at this census. With the exception of Baluchistan, where the Hindus are generally speaking immigrants and their number easily influenced by the composition of military units in Quetta, no province has shown any proportionate increase of Hindus to the general population except where there have been tribal religions to draw from. Muslims on the other hand have increased their ratio to the total population in all provinces except Ajmer-Merwara where the 1921 Muslim figure was artificially swollen by the Urs pilgrims.

Distribution by Religion of 10,000 persons in India, in the provinces and in the States, 1921 and 1931.

Province, etc.	Year.	Hindu.	Muslim.	Buddhist.	Tribal.	Christian.	Sikh.	Jain.	Other.
India	*1921*	*6,856*	*2,174*	*366*	*309*	*150*	*103*	*37*	*5*
	1931	6,824	2,216	365	236	179	124	36	20
Provinces	*1921*	*6,606*	*2,407*	*465*	*280*	*123*	*96*	*18*	*5*
	1931	6,548	2,469	468	213	142	118	17	25
Ajmer-Merwara	*1921*	*7,356*	*2,055*	..	*96*	*112*	*4*	*372*	*5*
	1931	7,755	1,734	..	27	124	6	348	6
Andamans and Nicobars ..	*1921*	*3,278*	*1,515*	*979*	*3,387*	*586*	*144*	*0*	*111*
	1931	2,586	2,280	988	3,379	496	220	0	51
Assam	*1921*	*5,434*	*2,896*	*17*	*1,479*	*168*	*1*	*5*	..
	1931	5,720	3,196	17	825	235	3	3	1
Baluchistan	*1921*	*920*	*8,731*	*4*	*0*	*159*	*182*	..	*4*
	1931	894	8,744	1	1	174	181	1	4
Bengal	*1921*	*4,327*	*5,399*	*57*	*181*	*31*	..	*3*	*2*
	1931	4,304	5,487	63	105	36	2	2	1
Bihar and Orissa	*1921*	*8,284*	*1,085*	..	*553*	*76*	*1*	*1*	..
	1931	8,231	1,132	..	544	91	1	1	0
Bombay	*1921*	*7,658*	*1,974*	*1*	*64*	*137*	*4*	*111*	*51*
	1931	7,605	2,039	1	59	145	10	92	49
Burma	*1921*	*368*	*380*	*8,506*	*534*	*195*	*4*	*1*	*12*
	1931	390	399	8,430	444	226	7	1	103
C. P. and Berar	*1921*	*8,354*	*405*	..	*1,160*	*30*	*1*	*49*	*1*
	1931	8,601	440	..	872	33	3	50	1
Coorg	*1921*	*7,733*	*795*	*1*	*1,265*	*194*	*0*	*12*	..
	1931	8,939	844	..	0	210	0	5	2
Delhi	*1921*	*6,669*	*2,904*	..	*0*	*273*	*57*	*96*	*1*
	1931	6,285	3,253	1	0	267	101	84	9
Madras	*1921*	*8,864*	*671*	..	*137*	*322*	..	*6*	..
	1931	8,831	707	..	75	380	..	7	..
N.-W. F. P...	*1921*	*666*	*9,162*	..	*0*	*47*	*125*	..	..
	1931	590	9,184	..	0	51	175	0	..
Punjab	*1921*	*3,181*	*5,533*	*1*	*0*	*159*	*1,109*	*17*	..
	1931	2,684	5,655	2	0	176	1,299	15	169
United Provinces	*1921*	*8,509*	*1,428*	..	*0*	*44*	*3*	*15*	*1*
	1931	8,450	1,484	..	0	42	10	14	..
States	*1921*	*7,748*	*1,343*	*12*	*415*	*250*	*126*	*104*	*2*
	1931	7,771	1,347	12	316	307	141	101	5

N. B.—A blank indicates that the number per 10,000 is fractional; 0 indicates that none at all were returned.

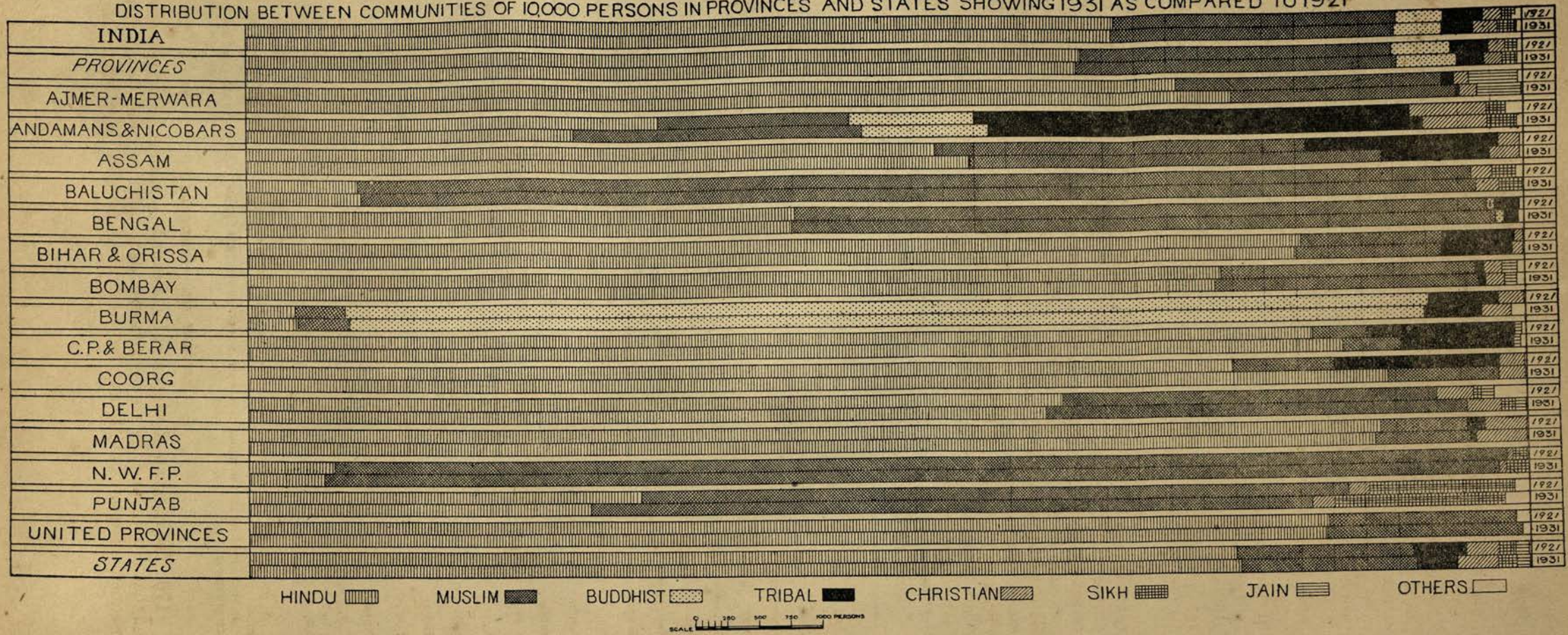
In the case of Assam the Khasi States are included in the 1921 figures. Otherwise all states are excluded from provinces.

Section iii.—General.

Hinduism in its relation to Primitive Religion in India.

176. The question of religion in India cannot, of course, be entirely disentangled from that of race, and the views expressed here must be read with those in the subsequent chapter, but it may be convenient to state here briefly the general

DISTRIBUTION BETWEEN COMMUNITIES OF 10,000 PERSONS IN PROVINCES AND STATES SHOWING 1931 AS COMPARED TO 1921



hypothesis reached. That is that a number of successive racial intrusions into and occupations of India have contributed to the elements now found in the Hindu religion, which took its final form as the result of the impact of the social ascendency of the Indo-European invaders of the 2nd millenium B. C. on pre-existing religious institutions. The first occupants of India were probably Negritos, and elements of their belief, perhaps including the reverence for the pipal tree and possibly a primitive phallic fertility cult, may have been perpetuated by the proto-australoids who were the next comers and probably contributed the totemic theory, or at least the basis thereof. The next elements were probably of Mediterranean origin contributing a phallic and a megalithic culture and the life essence theory, but the relative positions of the Dravidian-speaking Mediterranean+Armenoid, the proto-australoid and the Munda and Mon-Khmer or Austroasiatic races is difficult to determine and there is little material from which to draw a conclusion, and many would identify the proto-australoid and Munda racial elements. If the Munda speaking elements be distinct from the proto-australoid, it would be conveniently orderly to suppose that the Mundas came after them with a life-essence theory and the Mediterraneans still later to develop it into reincarnation, and bringing in the worship of the Great Mother, but it is conceivable that the Mediterraneans brought both the theory and its development and the Munda came later as a barbarian invader, though no doubt already in possession of the soul-matter philosophy, since at any rate the hill tribes of Assam, Burma and Indo-China appear to contain an element of Caucasian stock which penetrated to the S. E. of Asia before the southern migration of Mongolians of the Pareoean branch, and the soul-matter theory must have arisen very early in the history of the human race. Both Munda and Mediterranean must have been followed by religious elements from Asia Minor, brought *via* Mesopotamia by traders and settlers from the west, which superseded the fertility and soul-matter cult by one of personified deities, sacrificial propitiation and a formalised worship, again with phallic elements and such institutions as that of the *deva-dasi* (*vide supra* para. 102), together with astronomical lore and cults of the heavenly bodies and priestly institutions which formed the basis of modern Hinduism, the final form of which was determined by the successful conflict of this proto-Hinduism on the religious side with the imported religion of the " Aryan " invaders, to whom, however, it had to concede much socially, resulting in the socio-religious position of the priestly order so familiar in India.

The generally accepted view of the Hindu religion or society regards it as originating in Aryan invaders of about B. C. 1500 who came in with a higher civilization and a fairer skin to find the great peninsula inhabited by dark skinned barbarians on whom they imposed the religion of the Vedas. It is more than doubtful if this view can any longer be accepted, and the doubts cast on it appear to be confirmed by recent discoveries including that of a figure of Shiva among the remains at Mohenjodaro, while Sir John Marshall has clearly shown that the pre-Aryan religion of the Indus valley involved a cult of the bull, and of the snake—typical Mediterranean cults, to be found in Crete—and also of phallic symbols, including " ring " and baetylic stones, which are probably all part of the soul-fertility cult which is associated throughout India with menhirs, dolmens and a megalithic culture generally ; indeed Heine-Geldern connects the megalithic Mycenean theatre with India and so with the Far East and the Pacific Islands. It has been pointed out with some aptness that in modern Hinduism only those elements of Vedic rites have survived which are essentially social, such as the marriage ceremonies ; the argument being that though society was, or aimed at being, Aryan, its religion is older than that of the so called Aryan invasion. The god of the Rigveda Indo-Europeans is Indra, the thunder god, who fills in later developments an entirely minor role, apparently being absorbed into the Hindu pantheon just as the minor gods of primitive tribes have been, retaining, however, his personal identity by virtue of a social prestige or privilege which other tribal gods have lost in the process of assimilation. The historical Hindu religion first appears not in the Punjab, which must be regarded as the area most completely occupied by the Indo-European invaders, but to the east of that in the Brahmarshidesha where stable fusion between these Indo-European invaders and the previous inhabitants probably took place. When alien cultures and religions fuse to form a new culture or religion, it will not be found that this fusion takes place where the intrusive culture is strong enough to predominate. It will rather appear away from the centre where the intrusion is strongest, in some area where the previous culture was strong enough to resist

complete suppression and make its influence felt on the new one. Thus it is that the efflorescence of Hellenic culture took place not in Sparta, where was the purest blood of the northern invaders, but in Athens where the grasshopper-wearing inhabitants regarded themselves as autochthones and where there was probably effective fusion between the fair-haired northerner and the dark-haired Pelasgian. Similarly there is some reason to believe that Rome grew from a fusion between the ancient Etruscans and later invaders, whether the latter came from the east or from the north. In the same way it is suggested that Hindu religion and society finally took form and flourished as a result of the impact of the invading Indo-European on the indigenous religion that he found in India. It is quite clear that the previous inhabitants of India lived in cities and had a high civilization, probably of western Asiatic origin, and it is significant that Hinduism is remarkable for the similarity of many of its tenets and practices to those of Asia Minor and Mesopotamia. The indigenous religion of any country inevitably starts with an advantage over that of an invading people, since it is the priest of the country who knows how to approach the gods of the soil and propitiate them, and for that reason there is always a tendency for a local religion to establish its ascendency over an intrusive one. This appears to have been the case in India where the important position of Shiva, Vishnu and Kali, as compared to the unimportant one which Indra now holds, signalizes the triumph of the older gods. The religious history of pre-Vedic India was probably similar and parallel to that of the eastern Mediterranean and of Asia Minor. Prof. Tucci points out that though the moon does not appear to have been an independent divinity, ancient lunar cults have been assimilated by Devi in the forms of Durga, Kali and Tripura-sundari. The cult of snakes, the worship of a mother goddess were probably brought in by earlier invaders of Mediterranean or of Armenoid race, speaking no doubt a Dravidian language, whose religion must also be associated with fertility cults, phallic symbolism, the Devadasi cult and probably human sacrifice. Recent discoveries in Crete have revealed a remarkable snake cult associated with the symbol of the double axe. With Mesopotamia too we must perhaps associate a moon god and sun goddess whose sex was changed with a change from matrilineal to patrilineal descent perhaps under the influence of the Rigvedic invaders. It is worth pointing out that the deification and worship of kings, very typical of the Hindu attitude to kingship, is stated by Langdon (*J. R. A. S.*, 1931, page 367) to be characteristic of Sumerian religion in contrast to Semitic. It would also appear not characteristic of the religion of the Rigveda, but on the contrary to be connected with the beliefs in the external soul and in life-essence discussed below, inasmuch as the king contains or represents the life-principle of the community he rules. Like the cult of the snake, the transmigration of souls too appears to be a doctrine in no way typical of northern religions in which the dead live on underground, and Fustel de Coulanges has pointed out that it is not a feature of any northern religion though it has survived and been incorporated in them from the more ancient religions of Greece and Italy. Ancestor worship again is very strong in India and this too would appear foreign to northern European religion, and indeed it is almost impossible that nomads should be ancestor worshippers, and the Aryan invasion, so-called, was probably an invasion of steppe-dwelling tribes, pastoral in habit and still nomadic. Cremation they may have brought in and if so, they gave it a social cachet which is still leading to its gradual adoption by tribes which have previously practised burial or exposure, but it seems much more likely that the Rigvedic Aryans buried their dead and adopted cremation from the inhabitants whom they conquered. The 8th book of the Rigveda contains the following words addressed to the dead "I place this barrier (of stones) for the living.....that no other may go beyond it. May they live a hundred numerous autumns, keeping death at a distance by this hill.....Enter the mother earth.....Earth, let his breath rise upward (easily); oppress him not .....Even as a mother covers her son with the end of her cloth, so do ye, earth, cover him.....may these homes.....for all time be his asylum. I heap up earth above thee, etc.," (Rajendralala Mitra, *Indo-Aryans*, II, 123). This passage seems very clearly to indicate burial in a tumulus, and the word translated 'barrier.' is stated in a note to be *paridhi* which may mean part of a circle of stones. It is true that the 10th hymn of the Rigveda clearly refers to cremation, but the author above quoted rightly regards it as the later passage, and suggests that ritual exigencies involved the dislocation of the verses and their fusion for ceremonial purposes in the Yajurveda and the Sutras,

the reference to inhumation being then interpreted as indicating the burial of the ashes. It appears, however, quite clear that the hymn quoted above can only refer to the inhumation of the body, and that this practice as well as that of cremation was in use at the time of the Rigveda, while cremation is not mentioned until the 10th hymn, admittedly a much later composition than the earlier ones; cremation also seems definitely to have been the practice in the Indus valley of the Mohenjodaro period, and therefore the more likely one of the two to have been adopted as an alternative by the Rigvedic Aryans at their period of fusion with the preexisting population. The Aryan sanctity of fire seems likely to have been incompatible with cremation, and it will be remembered that Herodotus taxes Cambyses with impiety for having had the body of Amasis burned "for the Persians regard fire as a god and therefore to burn the dead is on no account allowed.....for they say that it is not right to offer to a god the corpse of a man." It may be noticed both that Wilson (*Infanticide in Western India*, 74) remarks of the Rajputs of Kachh and Kathiawar that they encouraged their concubines to commit *sati* in preference to their wives and actually gives as the reason that *sati* was a custom of low castes and therefore derogatory to Rajputs, and also that Rajputs in Gujarat who forbid widow remarriage are called *Vānkā*, 'crooked', and those who allow it *Pādhrā*, 'straight' (*Bombay Gazetteer*, IX, *i*, page 123-n).

With Asia Minor or Mesopotamia again we must associate astronomy and the worship of the heavenly bodies, which form an important part of Hindu culture, and in particular the cult of the moon god. Sun worship appears to be less important in the Rigveda than at a later date when the Bhavishya Purana is largely devoted to a cult of the sun. It is however possible that it was the influence of Rigvedic invaders which changed the sex of the sun from female to male and gave rise to the sun-descended nobility as distinct from the moon-descended. In Rigveda X Soma the moon is represented as male and as marrying Sūryā the daughter of the Sun. The name of the latter suggests that the Sun himself, Sūryă, was originally the female that married the Moon and that there has been a change of sex associated in so many parts of the world with variations of the Phaethon legend. Similarly again the existing holy places of the Hindus are outside Brahmavarta where one might have expected to find them, if it were really the fact that the religion actually arose in that area, while to find them elsewhere is consistent with a view that they are places regarded with devotion by the religions which preceded the invasion. This view is sometimes emphasised by the existence of Hindu shrines where priests and custodians are not Brahmans but some pseudo-Brahman or Sudra caste, *e.g.* the Malis who are the officiating priests of some Orissa temples and probably the Panda Brahmans of the same region. It is doubtless significant that sacrifice of cattle was "detested by the public" though enjoined by the earlier vedas, the inference from which is that the reverence paid to cattle predates the Rigvedic invasion, and Buddhism and Jainism, the latter of which contains extremely ancient ceremonial survivals, may represent a reaction towards the pre-Vedic religion to which the majority of the inhabitants of northern India were attached and which was modified but not destroyed by contact with the invaders. The first prohibition of cow-killing seems to be found in the comparatively late Atharva Veda and to be applied specially if not exclusively to Brahmans, while elsewhere we learn that the cow, although a fit offering for Mitra and Varuna, should not be sacrificed because such sacrifice is opposed to public feeling, a clear indication of the contrast between the religions of the socially superior Aryan invaders and the cattle-cherishing inhabitants who formed the bulk of the population. In Southern India, the Census Superintendent for Madras points out, "the cow is as much revered in those areas of the presidency with the lightest tincture of Brahmanism as in those more affected", which "may be taken to indicate that reverence for the cow in India is older than the Vedic religion." In any case the sanctity of the cow is foreign to the Rigveda and appears far more suggestive of the religions of Asia Minor, Egypt and Crete than of the Indo-European invaders who came from the steppes of the north-west to conquer northern India in the strength of their horses and of their iron. Indra moreover appears as the author of sacrifice and in the Yajur Veda it seems still to be Indra and Varuna who are the principal recipients of sacrificed cattle. It does not seem possible to accept Sir John Marshall's antithesis between the worship of the bull and the worship of the cow. Both are surely different aspects of the same reverence for cattle which characterises the pre-equine civilisations of the

Mediterranean basin, and in India are pre-"Aryan" in origin. The Vedas after all enjoined *gaumedha*, and the Black Yajur Veda lays down an elaborate list of deities to whom bulls, oxen and cows can be appropriately sacrificed. Vishnu, Shiva and Kali the great gods of Hinduism are not Rigvedic deities at all. Sakti is probably a cult derived from the Great Mother goddess of Asia Minor, and the cult of Shiva is inevitably associated with it, the two being bound up with the phallic religion of southern Asia and of the eastern Mediterranean. It is probably significant that the word *linga* is definitely of non-Aryan origin, as Przyluski has demonstrated, while the word *puja* is also believed to be a non-Sanskritic loan word. With the worship of Shiva, too, is to be associated the snake cult of which there are so many survivals in southern India and which appears to have been at an early date in definite opposition to Brahmanistic Hinduism, the conflict between the two being indicated, for instance, by Krishna's exploits against serpents, by the destruction of serpents at the burning of the forests of Khandava and the slaughter of serpents in the Mahabharata. Vishnu, apparently a post-Rigvedic god, is perhaps the fruit of the reaction of what we may call proto-Hinduism to the Rigvedic invaders, as also the present ascendency of male over female conceptions of the deity, and Przyluski in one of his most recent essays (*Archiv Orientálni; IV*, 2, August 1932) ascribes a Dravidian origin to the name 'Vishnu'. At the same time Vishnu would seem to have some associations with religious beliefs which must be regarded as represented chiefly in beliefs yet surviving among primitive tribes. Indra apparently is himself declared in the Mahabharata to be guilty of brahmanicide in killing Vrtra and Namuci who were Danavas, though the Rigveda praises him for the same deed. Pargiter adduces considerable evidence to show that the true Brahman families were of pre-Rigvedic origin and that the Aryan kings of Madhyadesha were their own priests and in the earliest times had no Brahmans. Strabo remarks that it is recorded that "The Indians worshipped Zeus Ombrios, the river Ganges and the indigenous gods" (τοὺς ἐγχωρίους δαίμονας—XV, 718) and as Zeus Ombrios is clearly Indra, the thunder god, the suggestion that the other gods worshipped are of indigenous origin is probably very near to the truth and the traditional view that the Hindu religion is a growth entirely subsequent to the Rigveda, or rather to the Rigvedic invasions, is no longer tenable. Rai Bahadur Ramaprasad Chanda in a paper on the "Non-vedic elements in Brahmanism" has made a number of points which indicate the continued existence of the pre-Rigvedic religions alongside of or in opposition to the orthodox Hinduism of the Brahmarshidesha. Quoting Kumārila and Medhātithi he points out that the Smartas include non-Vedic elements; thus of the four orders named in the *Dharmasutra* of Gautama (Student, Householder, Ascetic and Hermit) only that of householder (*grihastha*) is prescribed in the Vedas that the Upanishads were not originally recognised as part of the Vedic canon at all and had their origin outside Vedic Hinduism; that the Yatis destroyed by Indra are probably the forerunners of the Yatis of the Upanishads and the Smritis and that the latter order were organised on a pre-Vedic model; that the Pancharatra and Pasupata systems were condemned by Kumārila as non-Vedic and that the Vaishnavite and Saivite sects are derived respectively from those two systems; that contact with Pasupatas, Saivas, Jainas, etc., involved purification; that by the time of the Mahabharata, however, Pancharatra and Pasupata are placed on a footing of recognised and orthodox religious authority. His general conclusion is that the cults of Vishnu, Shiva and Sakti "originated among a people of different ethnic origins from the midlandic Aryans". The point to be emphasised here is not so much Chanda's precise conclusions as the evidence he adduces of the survival of pre-Vedic religion alongside and inside the later forms of Hinduism, and of their gradual absorption and acceptance as a recognised part of it, which has perhaps since developed into the position of their forming the most important part of it.

If the view be accepted that the Hindu religion has its origin in pre-Vedic times and that in its later form it is the result of the reaction by the religion of the country to the intrusive beliefs of the northern invaders, many features of Hinduism will become at once more comprehensible, while the very striking difference between the religion of the Rigveda and that of the Dharmashastras will seem natural. It will, however, be still necessary to look westward for the source of Hindu religion, though its spread in India was possibly in the nature of a peaceful infiltration along the trade routes from Asia Minor of beliefs and practices which associated themselves with those already followed by the indigenous inhabitants. This will

explain Hinduism's amalgamation with and absorption of local cults and its excessive multiformity, and is moreover in entire accordance with the manner in which it still spreads at the present day, absorbing tribal religions in virtue of its social prestige and by identification of local gods with its own, by an experimental resort to Hindu priests, and by the social promotion of pagan chiefs who, are provided with suitable mythological pedigrees. Onto the early Hindu beliefs spread in this manner the religion of the Rigveda has been imposed, and absorbed. Features survive curiously in out of the way parts beyond the pale of Hinduism itself. Thus the horse sacrifice has become a fertility rite among the non-Hindu Garos of the Assam hills and appears likewise in the wilds of Sumatra, though it has failed to establish itself in orthodox Hinduism. Similarly, though the sacrifice of cattle is anathema to the true Hindu, the *Taittiriya Brahmana* recommended a whole series of animal slaughterings, including both bulls and cows, to be performed at the *Panchasaradiya Sava* and at the *Asvamedha*, a series extremely suggestive of the scales laid down for successive feasts for the acquirement of social merit at such ceremonies as the *Terhengi* of the Angami Nagas, while the *Grihya Sutra* enjoins the *Sulagava*, "spitted cow" ceremony (corresponding roughly to the Angami *Sekrenqi*, as the *Panchasaradiya* does to the *Terhengi*) at which the beast was killed, as to-day by Sema Nagas, with a pointed stake, and its death accompanied by the erection of a wooden post with a round top mortised on to it and by the distribution of the animal's flesh.

Viewed in this light it is not difficult to understand the claim of certain politicians that the term Hinduism should cover all religions having their origin in India, even though we hold that the original impulse came from the Mediterranean or Asia Minor, since Jainism, Buddhism and Sikhism are all offshoots of the same root. The claim is less logical when applied to tribal religions which have not yet reached the stage of accepting Brahmans as priests or of attaching any sanctity to the cow or of worshipping in Hindu temples in their own villages. An occasional visit to Hindu temples away from home is not quite a safe test since many such shrines undoubtedly occupy sites dedicated originally to more ancient indigenous deities and subsequently Hinduised, and in any case it is typical of primitive religions to propitiate the gods of any locality they may visit. Admittedly however the line is hard to draw between Hinduism and tribal religions. The inclusion of the latter within the Hindu fold is easy and wherever hill or forest tribes live in permanent daily contact with Hindus their religion rapidly assimilates itself to that of their neighbours though the old method of thinking is unchanged. Thus it is that religious or quasi-religious beliefs and practices among Hindus appear very frequently to be based on the principles of magic, *mana* or other ideas common in primitive religion. The very word *brahma* itself seems to have probably connoted originally supernatural power or influence of the nature of *mana*—a view apparently supported by the Atharva Veda, and these beliefs and practices survive and operate with all their primitive qualities alongside the loftiest heights of asceticism and philosophy. If it appears that the latter aspect of the Hindu religion is lost sight of in these pages, it is because their purpose is rather to articulate the fragments of the more primitive and material philosophy that preceded it, than to emphasise what is already of long-standing and undisputed recognition.

We may therefore expect to find very ancient and primitive beliefs continuing under the guise of Hinduism. The sanctity of the fig tree for instance is possibly to be associated with the beliefs of the Negrito inhabitants who appear to have formed the earliest population of India. It is probably on account of its milk-like sap that the *ficus* is associated with fertility cults in Africa, Italy and New Guinea as well as in Assam and in southern India, and it is generally also connected with the spirits of the dead. This cult appears to be shared by the Andamanese who are an approximately pure Negrito race and perhaps the only race still surviving in the world comparatively unmixed in blood. At any rate they and their beliefs have probably been isolated for some five thousand years at least. Similarly, though the probability is that this element of Hinduism is due to some pre-Aryan immigrant cult from the direction of Asia Minor, the possibility that some tribal and totemic taboo has acted as a contributory factor in the religious sanctity attaching to cattle cannot be entirely overlooked. Thus the flesh of cattle is tabooed by certain clans among primitive tribes of Assam and Indonesia who do not appear to have come even remotely under the influence of Hinduism, while on the other hand

the cow is regarded as completely tabooed by the Shins of Chilas, who are described by Leitner as a Hindu tribe with nowadays a veneer of Islam, the highest caste in Dardistan and really Brahmans themselves though expelled from India or from Kashmir by Brahmans. Not only do they taboo the flesh of the cow but also its milk and only touch a calf at the end of a prong.

Pargiter's view of the original conception of *brahma* as akin to that of *mana* has already been mentioned and this view seems naturally to associate itself with the views on soul-matter, or life itself as a transferable and material substance, which are so familiar in Indonesia and further India but which are actually common enough in India itself. It is on this theory of the indestructibility and transferability of life-matter that the underlying principle of head-hunting is based in Assam; in other parts of the same cultural area it is manifest in human sacrifice or in cannibalism, the latter perhaps being its most primitive manifestation and the former its most developed. That the principle is still strong in India may be inferred from a number of recent instances several of which are given later. In the form of head-hunting this theory involves that which regards the head as the particular seat of the soul, and this belief is apparent in India proper in the sanctity which attaches to the head or to the hair, as also in many cases where the (soul-impregnated ?) hair does duty for the individual, as in the case of the Naga who dies far from home and a portion of whose hair is brought back by his companions to be attached to the head of the wooden effigy which is then the subject of the usual funeral ceremonies, and as also in the case of the head-hunter who so often substitutes the hair of his dead or even of his living, and unwitting, victim for the head he cannot carry off.* The Ujli Minas when unsuccessful in dacoity will only shave at home and after propitiating their goddess. Probably they fear that they may be suffering from a loss of life-essence as Samson did when his hair was cut. Conversely a Korku woman of the Central Provinces tries to obtain as a cure for barrenness a hair from the mother of a large family which she buries under her bathing stone. The same theory may perhaps be the origin of the familiar caste mark placed in front of the forehead just between eyebrows. The Angami Naga tribe regards this particular place as the special seat of the soul, conceived of as a diminutive human shape, which it is necessary to guard from the infectious influence of strangers by means of disinfectants. This is done by attaching to that particular spot on the forehead a small fragment of the leaf of the wormwood—an effective disinfectant of spiritual influences, like other aromatic plants. It seems likely that it is in a practice of this sort and as a protection against danger to the soul that the use of the caste mark may have first originated.

Fertility cults have already been mentioned. These like head-hunting and human sacrifice are intimately associated with agriculture and the line is hard to draw at the point at which a purely magical fertility rite begins to develop into ceremonial of a genuinely religious nature. At any rate a point is easily reached by the former which is correlated to the latter, and the tribal cult ceases to be purely tribal and is identified with some definitely religious festival so that the magical, ceremonial and devotional aspects become merged. Magical fertility rites, originally regarded as necessary to ensure the processes of nature, are thus conserved and crystallized and continue to be accepted as a natural feature in the ceremony when the reason of their being there is forgotten. So too features of such rites which in the beginning are natural and inevitable, since they are regarded as essentially necessary to make the rite effective, and for this reason are performed without any sense of impropriety or obscenity, become, when they cease to be essential to the ceremony, effectively indecent but are not recognised as such as long as the traditional form of the ceremony continues to be unquestioned. In this form ceremonies and practices survive long after the conditions of society in which they originated have changed. Thus rites essentially priapic survived at Isernia near Naples at any rate into the 19th century actually under the aegis of the Church, and it is only on contact with and under criticism from some external source that familiar and therefore unquestioned practices are seen in a new and critical light. That this process is now taking place in Hindu society is sufficiently obvious. The Cochin Government has prohibited the singing of

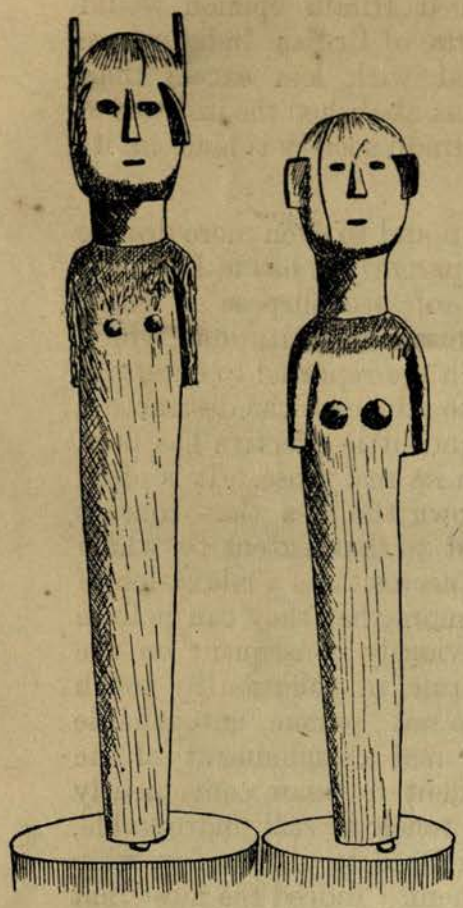
* *Cf.* also *supra* para. 102.

obscene songs, etc., at the *Holi* festival, and advanced Hindu opinion would probably welcome a similar prohibition in many parts of British India, where already the festival seems to be generally celebrated with less excess than used to be the case. The Government of Mysore has abolished the institution of Devadasis, and here again an influential element in Hindu society is loud in its approval.

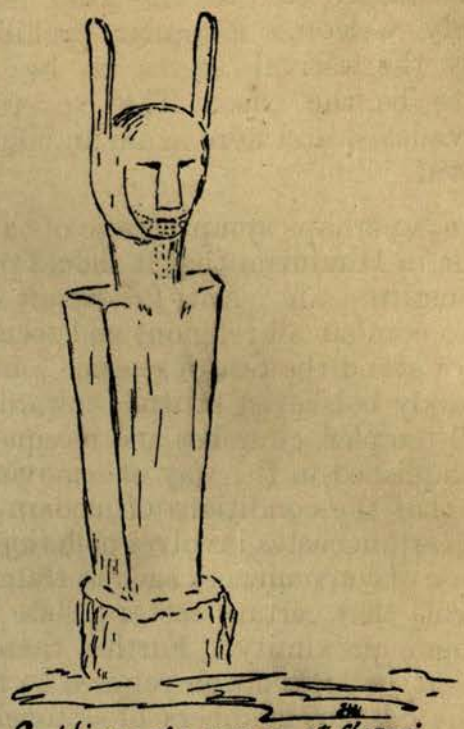
It is perhaps symptomatic of the tendency to reform and to even more drastic change in Hinduism that it should prove possible, as apparently it has in Bombay, to constitute an "Anti-Priestcraft Association", the professed purpose of which is "to combat all religious and social beliefs and customs and institutions which cannot stand the test of reason", and members of which are reported to entertain a frankly bolshevist attitude towards all religions and to advocate the destruction of all temples, churches and mosques. On the other hand little effective has been accomplished in the way of removing untouchability in its real sense. It is often said that the conditions of modern life have broken down the idea that contact with certain castes involves pollution, and this is true just to that extent to which the use of conveniences such as trams, 'buses and trains necessitates a relaxation of the rule that certain castes pollute by touch and still more that they can pollute by mere proximity. Further there is a tendency obviously consequent on the necessity of relaxation referred to above to relax the rule of pollution by touch in the case of members of untouchable castes who do not pursue untouchable avocations. This does not necessarily involve any real abandonment of the attitude of caste Hindus to what the Census Superintendent of Assam conveniently describes as the "Exterior Castes". The water they touch is still undrinkable, food they touch becomes impure and they are not admitted to places of worship or to restaurants nor will the ordinary barbers serve them. Indeed the most that seems to have been yet accomplished* is the occasional staging of inter-caste meals, gestures which appear so far to have had little practical effect on the general attitude of the caste to the outcaste Hindu. But it must not be forgotten that the attempts of the depressed classes to obtain the right of entry to temples is perhaps sometimes as much inspired by social motives as by religious ones, and produces an antagonistic reaction which might be absent if religion alone were involved.

The tribal religions, as has been indicated already, represent, as it were, surplus material not yet built into the temple of Hinduism. How similar this surplus is to the material already used will appear in many ways and may be noticed, to start with, in the cults of the dead. The Hindu rites of the *shradh* provide for the creation of a new body to house the soul of the deceased and, though theoretically renewed every year to maintain it, they are usually as a matter of fact gradually abandoned with the lapse of time. In the tribal religions this cult of the dead is seen in a precisely parallel form but at a very much more matter of fact and materialistic stage of the development of the idea. Thus in Mysore the Hasalar tribe redeem the soul with a pig from the magician who has caused the death and domicile it in a pot where it is supplied with food and water. The Nicobarese and some Naga tribes fashion wooden figures on which the skull of the deceased is placed in order that the soul may leave it and enter the wooden figure. It is for a time kept supplied with all worldly necessities. A similar practice must formerly have obtained among the Garos of Assam, but it has disappeared and in the wooden figures now used the pegs that held the skull in place have become unrecognizable, surviving apparently as a sort of a pair of ornamental horns, though an obsolete grave figure in the Indian Museum in Calcutta has a pair of horns much more nearly approximating to the trans-frontier Konyak Naga type. Further west and south the Sawara of the Ganjam Agency tracts uses a similar but more conventionalised wooden figure to accommodate the soul of his cremated dead during the interval between death and cremation and the time for the erection of a stone or stones for the souls of the dead during the year past, which is done annually about the time of the sowing of the crop. Still further west the Kunbi of the Central Provinces make an image of their dead in brass which is kept until the

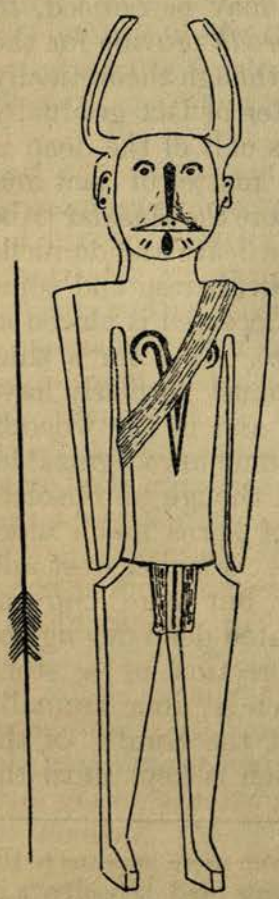
* This was written before Mr. Gandhi's fast, which has certainly given more impetus to the movement against untouchability, while the younger generation, students and schoolboys in particular, has for some time been manifestly more tolerant than their elders, particularly in Bengal and Assam.



OBSOLETE TYPE OF GARO GRAVE FIGURE (KIMA)
From specimens now in the Indian Museum, Calcutta



Soul-figure of a woman at Chongvi with horns for keeping her skull in place (Konyak Naga tribe).

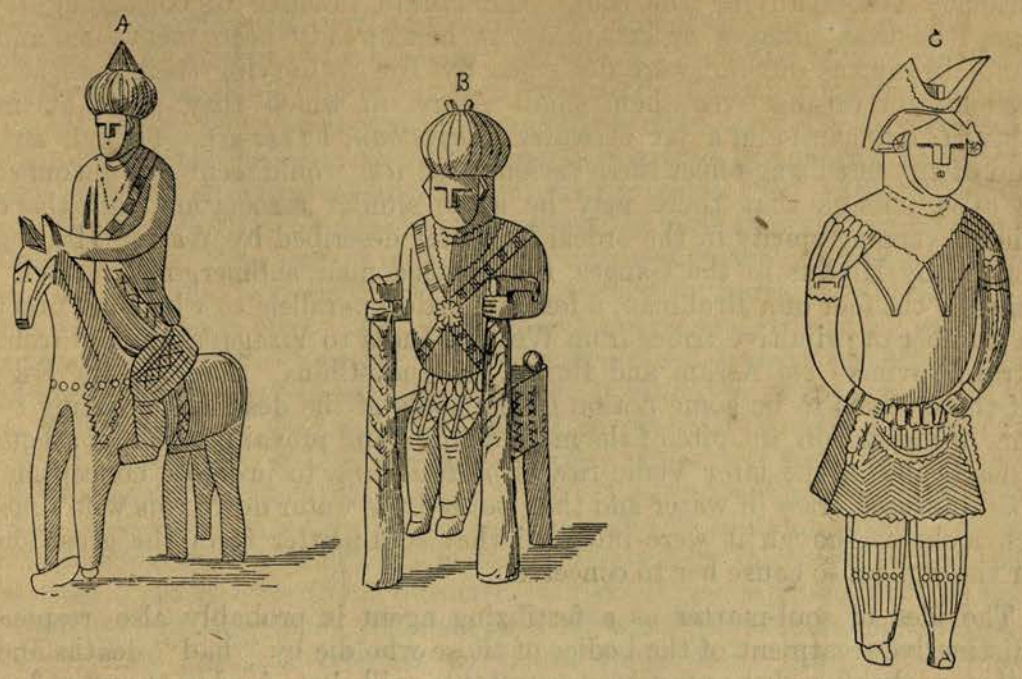


STATUE OF DEAD MAN WITH SKULL RECEPTACLE ON HEAD – ÜKHA VILLAGE, KONYAK NAGA.

Statue of Nicobarese with skull of deceased as head.
The wooden body serves as a cupboard for his bones.
Teressa Is. 1930.

So-called "DEVIL-SCARER" in the Nicobars with "horns" projecting from his top-hat

superfluity of such images necessitates their deposit in the water of some sacred river. In the north the statues of the dead made by the head-hunting Kafirs of



Kafir memorial effigies, A & B male, C female, set up one year after death.
Sketched by the late General R.G. Woodthorpe at Apsai, Bashkol R. Kafiristan, 29th September, 1885.
(By the courtesy of Mr Henry Balfour)

the western Himalayas had probably the same purpose, while in western India may be seen the chattries of deceased Hindu Maratha rulers in which the recumbent bull and a lingam face the waxen images of the dead prince and his wife, which latter are piously supplied with food and other requisites and are entertained with music and have their clothes changed regularly once a week. In the very south of India the Malayarayans of Travancore make a metal effigy of the dead, which is kept in a miniature stone cist covered with a capstone (like the tattoed skull of a Konyak Naga in the north-east) and erected on high ground. The image is brought out annually and feasted and worshipped with tulsi leaves on its head.

Allusion* has already been made to the theory of soul-matter as a fertilizer of the crops and a producer of life generally, a theory which appears to pervade the magico-religious thought and practice throughout Indonesia and south-west Asia and survives in strength in further India. The Sawara custom above is probably a mere manifestation of the same idea, since the collective disposal of the village's dead at the time of sowing is clearly associated in some Naga tribes with their aspect as crop fertilizers, while the Oraons of Chota Nagpur again temporarily inter their dead, if the paddy has sprouted, to be cremated the following year before it sprouts. The connection between the souls of the dead and the fertilization of the ground is reflected again in their very frequent association with water. It is hardly necessary to call to mind the value set by Hindus upon the immersion of their dead in the Ganges, but there are a number of parallel beliefs in more or less primitive tribes which do not seem to owe their existence to Hindu influence but rather to share their origin with the ingredients of that religious system. Thus the Meithei practice of disposing of the frontal bone of the deceased in the Ganges appears, at first sight, to be the result of their Hinduization, and no doubt their choice of the Ganges is such a result, but their neighbours the Kacharis, when yet unhinduized, used to consign their frontal bone to the Kopili river after the harvest, while the Rengma Naga makes a pool for water at the grave of any notable man that the rain, and rice, may be plentiful, and at least one other Naga tribe pours water on a grave to cause rain, while the Palaungs of eastern Burma fetch a bier pole from a grave and put it in a stream for the same purpose. The Santal again have the practice, at any rate under certain circumstances, of consigning a piece of bone from the head and another from the breast of the dead to the waters of the Damodar river. The Panwar mourner, besides throwing into the Narbada the

* See above on page 398, and for an instance of such a specific theory page 409, below.

bones of the dead, throws in with them some of his own hair also, thus perhaps vicariously accompanying the soul. The Kunbi practice of consigning to the Ganges the brass images of his ancestors has already been mentioned and the Bishnoi Brahmans of Sind were described by Tod as burying their dead at their thresholds and raising over them small altars on which they place an image of Shiva (? a lingam) and a jar of water (*Rajasthan, VIII, ii*). Though nothing is said of any fertilizing effect these various practices would seem not unconnected. It is even possible that there may be some similar association with the dead or their avenging spirits in the ordeal by water described by Warren Hastings as practised by Hindus in the Ganges, the accused man submerging himself and holding to the foot of a Brahman, a form of ordeal parallels to which are practised by a number of primitive tribes from Western India to Vizagapatam and from the Central Provinces *via* Assam and Burma to Indo-China. Even in the Rigveda itself there seems to be some notion of the souls of the dead as departing to the waters or vegetation, in spite of the more definite and prevailing idea of a house of the dead, and in the later Vedic rite of *garbhadhana* to promote conception the husband infused grass in water and then poured the water down his wife's nostril, which looks as though it were intended that soul-matter from the grass should enter the woman to cause her to conceive.

The idea of soul-matter as a fertilizing agent is probably also responsible for distinctive treatment of the bodies of those who die by "bad" deaths and are therefore probably either unfertile or unsuitable or likely to lead to the reproduction of bad results. It is thus that we find everywhere special treatment accorded to the bodies of women who die in child-birth, while other forms of death are treated differently, *i.e.*, as bad or otherwise, by different tribes. In the case of persons killed by wild beasts the idea is perhaps the soul-stuff of the dead is absorbed by the wild animal, and this is illustrated by the widespread belief that the soul of the dead rides on the tiger, as told for instance by the Annamites of Cambodia and the Baigas of Central India. The idea that the soul of a person killed enters the killer is found elsewhere, *e.g.*, in Australia.

The same doctrine of soul-matter is probably the principle which underlies head-hunting, human sacrifice and cannibalism. The first of these has been recognised in India only in Kafiristan and in Assam, though it is reported of the Bhils that they were at one time accustomed to bring back the heads of their enemies and hang them up in trees (*Rajputana Census Report*, 1931), while the Kondhs circulated a head, hair and fingers as a signal for a rising in 1882, and of four heads taken in that rising one at any rate was "affixed as a trophy" to a tamarind tree near Billat village; again a Brahui clan explain their name of Sarparra as meaning 'decapitator' and have been identified with Strabo's "Saraparae, that is Decapitators" who lived near the Guranii and the Medes and were "savage intractable mountainy men" who "slash round the legs* and cut off the heads of strangers." The theory however on which it is based, that the soul-matter is specially located in the head, may be detected elsewhere. Thus the Andamanese attach special importance to the jaw† and to the skull in mourning, and at any rate one case is recorded of their carrying off the cranium of a victim killed in warfare. The Newars of Nepal apparently show traces of the separate treatment of the head in burial, a feature frequently associated with head-hunting in Assam, Indonesia and Oceania, Melanesia in particular, and undoubtedly based on the same idea. Head-hunting as a

* The generally preferred reading, περισκυθιστάς for περισκελιστάς is translated "scalp in the Scythian manner" but this is hardly compatible with decapitation, either would seem to be ἅπαξ λεγόμενον and the former reading is much more likely the emendation of a scholiast who knew his Herodotus, but was as unacquainted with what is a common feature of head-hunting practice as with the unusual word coined by Strabo to describe it; Casaubon indeed explains the name of the tribe as a facetious metaphor from Persian trousers (σαράβαρα = 'jodhpurs') 'diminishing at the knee.' A Naga headhunter who does not actually remove and suspend from the village head-tree the foot and leg of his victim will frequently slash the legs in order to entitle him to wear the embroidered gaiters of a warrior who has taken his enemy's legs, while some tribes on the north bank of the Brahmaputra are reported to cut off the hands and feet of their enemies (though they do not decapitate) probably to hamper possible attempts of the ghost to pursue and harm them.

† *N. B.*—Special importance often attaches to the lower jaw among head-hunters both in Asia and Africa and sometimes to the tongue which is regarded as the seat of life.

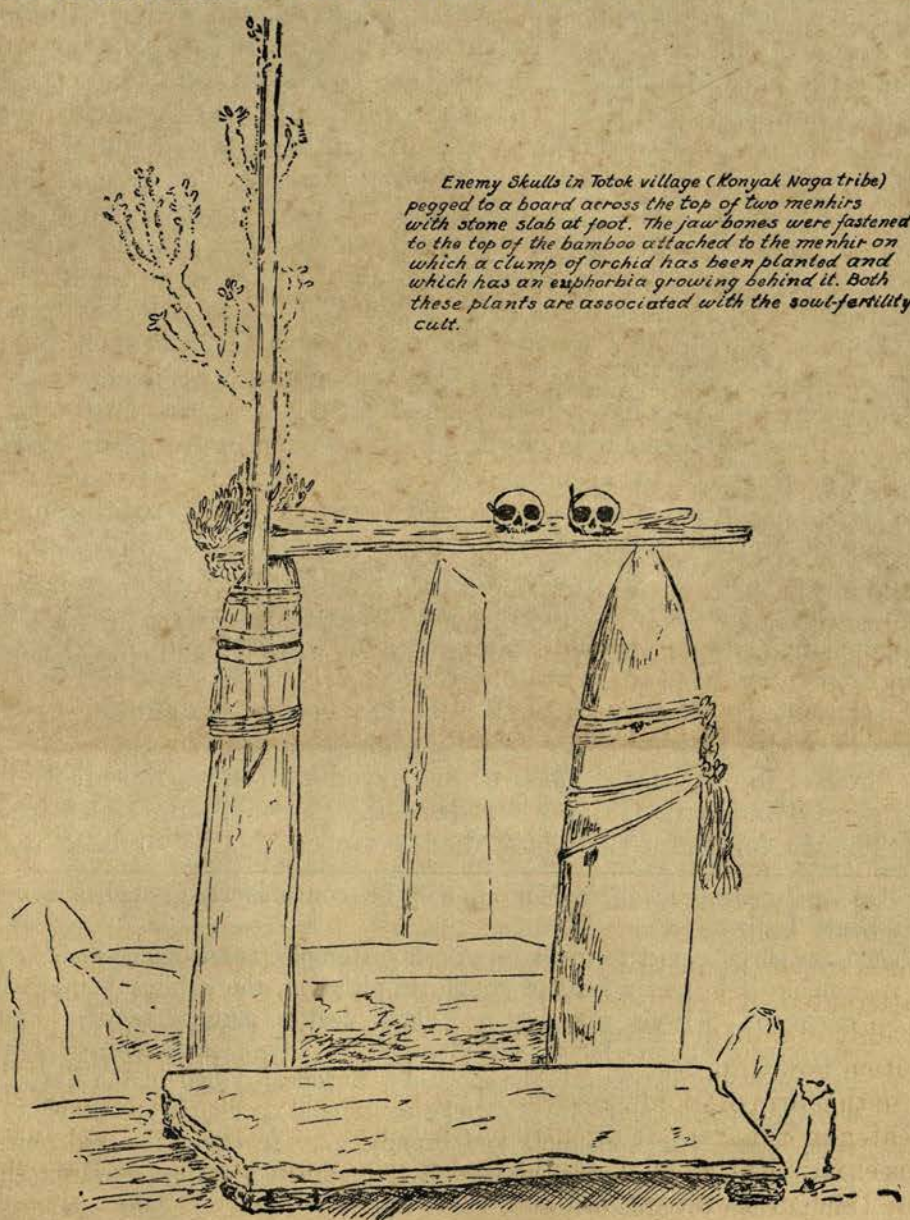
necessary preliminary to marriage, as it is in most if not all genuine head-hunting tribes, is to be explained by the idea that unless a man has taken heads he has no surplus soul-matter about him to beget offspring.* Probably the same notion is to be seen in the Chang Naga practice of naming a child after a village raided by his father. Thus the present chief of Yongemdi is named Longkhong and his brother Ongli after the Ao villages Lungkhung and Ungr which were successfully raided by their father with considerable slaughter about the time that they came respectively into this world. The same notion is clearly present in the cases that come to light from time to time in India of murder as a remedy for barrenness in women. Thus in October 1929 the High Court of the Punjab had to deal with a case in which a girl, desperately anxious to bear her husband a son, killed a child, cut off its hands and feet and bathed herself standing upon them. It cannot be doubted but that the idea was that the life of the dead child should become the life of a fresh child in her womb. Again early in 1930 a case occurred in Gujarat of the murder by means of sulphuric acid of a 12 months old boy by a girl of 20 who had no child, and it was part of the prosecution case that it was a comparatively common practice on the part of barren women to attempt to quicken themselves by burning marks on children in the street, a practice no doubt ultimately derived from one which involved the taking of the child's life, and which may be compared with that of branding children offered to the Syrian Goddess referred to below (page 411). And if head-hunting is rare in India, human sacrifice, on the other hand, has been widespread and has clearly been ultimately based on the same conception of the necessity or at any rate the desirability of releasing soul-matter to fertilize the earth. No doubt it was later interpreted as the placation or propitiation of an earth deity, but this must be regarded as a sophisticated justification of a practice the true meaning of which had become obscure or been forgotten. The Kondhs are described as having performed their Meriah sacrifices to the earth mother, but the details of the ceremony and the practice of distributing fragments of the sacrificial meat in their fields and granaries show a very patent connection with the disposal of enemy flesh by head-hunting Nagas and the underlying idea is undoubtedly the same. In one form of the sacrifice the victim was squeezed to death in a cleft in a green tree, and in another the tears caused by his sufferings brought rain in proportion to their profusion. Similarly the Wa of Burma definitely associate their head-hunting with the sowing of the crop, while the successful Kafir head-hunter was greeted, on his return from the foray with his trophy, by a shower of grain. In Kulu the transplanting of the rice is accompanied by the sacrifice of a rough dough image of a man to the house god. So again the Dasehra festival, now associated by all Hindus with the killing of Ravana by Rama, coincides throughout most of India with the sowing of the winter crops, in particular with that of millet, a more ancient staple in south Asia than rice, as well as with that of wheat. It is this festival that is associated in western India with the worship of weapons of war (and it is still regarded there as a proper day on which to go forth and loot) while it is then that human sacrifices used to be performed in eastern India, and it is still on this festival that the *gupta puja*, the hidden rite, to ensure the prosperity of the person, house or family, would be resorted to if ever. The association of human sacrifice with the prosperity of the individual and with the success of the state in war seems clear enough, and its association with crops may be inferred with equal safety. It was probably some such association of soul-substance with fertility and perhaps with some notion of a higher fertility value attaching to Europeans that led Oraons to remove portions of the body of a recently buried European not very long ago. The evidence at the trial made it clear that special value attached to European bones for magical purposes (see *Indian Antiquary*, Dec. 1929). The location of the soul in the head and the confusion of the soul with the shadow are illustrated in the Himalayan cure for fever in which the patient stands in the sun and a bone filled with grain is buried in the spot where the head of the shadow falls (Crooke, *Religion and Folklore of N. India*, 1926, page 222). The same idea of soul-matter as a fertiliser is probably at the bottom of human sacrifice as a cure for illness, as in the case of a Santal of Dhanbad who in 1931 garlanded and then beheaded his infant son in order to effect a cure of his own maladies.

* Conversely I have known a Brahman gardener in the Simla Hills refrain from setting grafts himself since to do so would prejudice his chance of begetting children, clearly on account of the loss of life-matter; instead he called in an old man past the breeding age to do it for him.

True cannibalism is only traditional in India but vestiges of ceremonial cannibalism survive in many places or have done until recently. Thus Portman records the practice of Andamanese homicides, who drank of the blood and ate of the raw fat of the victim and of the flesh of his breast, the latter apparently cooked. In the north-west the Kafirs used to eat a piece of the heart and drink some of the blood of their enemies they killed. In the north-east the Lushei of Assam used to taste the liver and lick from the spear-head the blood of the first victim slain in war. The nearly related Thado eats his first meal after taking life with hands deliberately imbued with his enemy's blood and still uncleansed therefrom, a custom practised as late as 1919, and the same custom obtains in a decayed form among the independent Semas of the Assam frontier, where a returning head-taker must eat at least a morsel of food before entering his village; the insistence is on the meal now, but it is eaten with still ensanguined fingers as he may not cleanse himself until after he has taken this meal. The intention in all these cases is certainly to transfer to the slayer the soul-matter or life-matter of the slain, just as the soul-matter of so many kings has been transferred to their successors by their murder. Similar in principle is the practice of anointing at his succession the intrusive Rajput ruler with the blood of the indigenous Bhil who regards the right to give it as a precious privilege, even though the giver is believed always to die within the year, his soul-matter exhausted no doubt in providing for the fertility and prosperity of the State. It was no doubt a similar idea to that of the Kafir and the Thado which inspired the action of Nana Pharari, a notorious dacoit of Nasik in Bombay Presidency who stabbed a personal enemy in July 1930, pulled out his knife from the victim and applied its gory blade to his forehead and to his tongue. The action of applying the blood to the forehead offers a very close parallel to that of the Angami Naga who never drinks liquor without applying on the tips of his finger a drop to his forehead for the benefit of the material soul resident within. The drinking of human blood and the tasting of human flesh is common in Indonesia and Oceania and it is likely that it has at one time been more prevalent in India than it is now. It was reported of the Wa of Burma by Sir George Scott that probably human flesh was eaten on special occasions, possibly at the harvest festival. The Wa are also credited by the Shans with eating their dead relatives like the Battak of Sumatra, and this, a practice probably arising rather from a belief in reincarnation than directly from that in life or soul-matter, has also been reported of some tribes in India. Thus Herodotus mentions the Callatians as an Indian tribe known by Darius to practise this, and he attributes the same custom to the Padaei, for whom an identification has been suggested with the Birhor of Chota Nagpur whom Dalton states to have admitted its former pratice by their tribes. The same custom has been likewise attributed to the Lobas of north-east Assam (called Mishu Ting Ba by the Tibetans) in particular, to the hill tribes of Chhattisgarh and of the Amarkantak tableland, as to the hill tribes of Assam, in general, and to some of the transfrontier Kachins of north-west Burma, though in these cases there is no well authenticated evidence. A possible survival of the same practice is to be found in the Kharia custom in the Central Provinces of catching, and eating communally, a fish on the third day after a person's death, the fish being a common vehicle of the soul as is noted elsewhere in this chapter. All this points to some pre-existence of this practice and to a clear cultural link between the more primitive tribes of India and those of the Indian archipelago.

Perhaps the crudest form in which the doctrine of soul substance appears is the vulgar but widely credited superstition which attributes to the European the practice of catching fat black boys and hanging them by the heels over a slow fire to distil from a puncture in the skull the seven drops of vital essence which imparts to sahibs in general their energy in field sports and their activity of mind and body. Curiously enough this life essence, this *momiyai*, seems to have started as bitumen simply and to have been used as a quite legitimate medicine, then to have become a spurious substitute in the form of resin, the supposed virtues of which were later attributed by confusion to the embalmed bodies from which this resin was most readily obtained. From the dead body a fourth transfer has taken place and superstition now imputes the virtue of the medicine to its distillation from the living body in the form of its life-essence. This belief caused several harmless strangers to be beaten in Saharanpur recently on the suspicion that they were manufacturers of this elixir. Enthoven mentions that it gave some trouble in the outbreak of plague in 1896 in Bombay, and the belief is clearly still active. Possibly it

has some bearing on the reluctance felt in India to remain in a hospital. Here again it is by Hindus, or persons classified as such, that this superstition is generally held, and the Kabuli trader who brings *momiyai* for sale from Afghanistan is probably under no delusion as to its composition or virtue. The theory is also to be seen in the Aghoripanth philosophy (Russell, *Tribes and Castes of the C. P.*, Vol. II) and in occasional cases of cannibalism that come to light in the criminal courts. Thus in September 1931 two men, one apparently a Rarhi Brahman ascetic and the other a Mahabrahman were accused in Bankura of having dug up the newly buried corpse of a child, of having taken it to their *asram* and of having there cooked and eaten part of it; the Rarhi Brahman admitted having eaten a little of the heart "as he believed it was a part of his religion to do so". It is perhaps partly due to the influence of the primitive belief in this life-giving soul-matter that so much importance is attached in India to the reproduction of the species to pass it on reduplicated to the next generation, so that the penalty of failure to marry is among the more primitive tribes extinction at the hands of a demon who bars the pathway of the dead, while among a number of Hindu castes, as also among the Todas of southern India, the corpse of a person dying unmarried is married before cremation as a necessary qualification to future happiness. The doctrine of soul-substance as a fertiliser is naturally not less applicable to animals than to human beings, and it is therefore not surprising to find the Malas of southern India and Ahirs at the Gaidaur festival causing their cattle—the young in particular—to trample a pig to death, after which according to the ancient custom, the corpse of the pig is eaten by the Ahirs who thus share in the transfer of the porcine life-substance to their cattle. In the case of the Koravas, who have a similar practice, an instance of the substitution of a human being for the more usual pig is actually on record (Thurston, *Castes and Tribes of South India,* III, 463 sq.), the unfortunate having been buried to his neck before the cattle were driven over him.



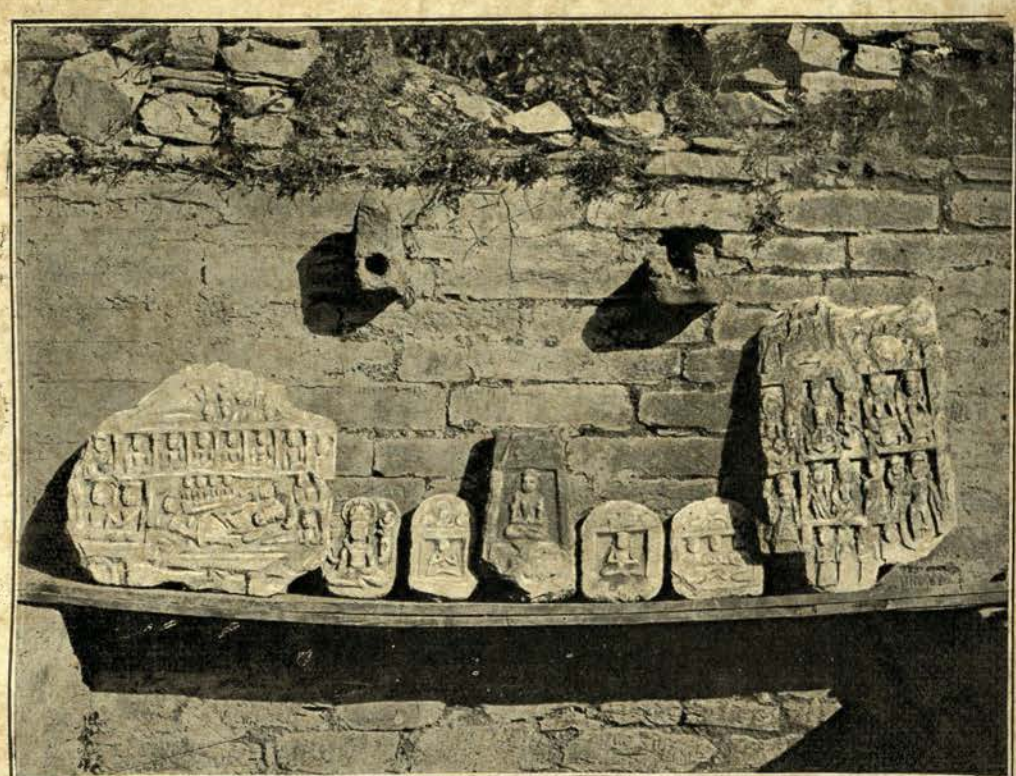
Enemy Skulls in Totok village (Konyak Naga tribe) pegged to a board across the top of two menhirs with stone slab at foot. The jaw bones were fastened to the top of the bamboo attached to the menhir on which a clump of orchid has been planted and which has an euphorbia growing behind it. Both these plants are associated with the soul-fertility cult.

Involved again in the belief in soul-matter probably is the practice of erecting megalithic monuments and wooden images of the dead. The two practices are not completely separable as both appear primarily to be intended to afford a temporary dwelling for the soul pending its operation as a fertilizer of the crop. The megalithic monument appears very often as merely a permanent substitute for the impermanent wooden statue which can be given greater resemblance to the human body. Thus the wooden statues of the dead put up by the Angami Nagas of Assam are in some villages destroyed after the harvest and the others have a small stone erected behind them to do duty when they have perished. In other villages again a man's youngest son succeeding to his father's house must put up a monolith for his deceased parents, an act corresponding to that of some other villages in which the monoliths are erceted during their lifetime by specially prosperous persons to enhance the prosperity of the community as a whole. The significance of the latter monolith is quite definitely phallic and ancient specimens still exist whose form puts this beyond dispute, both as a solid menhir and as hollow monoliths which contained the ashes of the dead, and there is no doubt but the association is here again with the soul-matter as a fertility agent, and an echo of the doctrine is perhaps to be found in the Vijayanagara legend of the head of the hero Ramanatha which when returned to Kummata became united with the *lingam* of Shiva. It may be noted that Kampila, the defender of Kummata appears, or at least his troops do, under the guise of head-hunters (*Journal of the Mythic Society*, January 1930), while dolmens have actually been used as Saivite temples; in the Naga Hills the cult of head-hunting is, like that of the dead, associated with menhirs and dolmens and other symbols of fertility like the milky *ficus* or *euphorbia* trees. The remains of this megalithic culture in India are widespread though in most places completely decadent, and they generally show sporadically very similar traits. Thus the disposal of the dead of the community during the sowing season has already been mentioned and in further India it is, or used to be, associated with a certain amount of mummification of the dead to make them keep, some tribes, *e.g.*, the Ao Nagas smoke-drying the body, others *e.g.*, the Khasis, embalming it in honey. The use of a soul-figure is merely a different method of obtaining the same end, and by the Konyak Naga of Assam a wooden figure is provided to house the soul until the head can be separated and disposed of in a phallic stone cist. The Sawara of the Ganjam Agency in Madras burn their dead, but a wooden figure is provided to house the soul till the erection of monoliths for the dead which takes places annually about the time of sowing. Soul-figures, probably of similar purpose in the first instance, are made in earth by the Handi Jogi of Mysore. The Nicobarese, like some Nagas, place the skull of the dead on a wooden body, and at this census such a figure was to be seen on the island of Teressa, the skull doing duty as a head incongruously surmounted by an old top hat, the treasured headgear of the dead man. It is impossible not to see the same idea underlying the waxen figures of deceased Hindu princes already referred to accompanied as they are by a stone lingam. It seems therefore not unlikely that the carved stones erected to the memory of Rajput dead of both sexes have a similar origin, and table stones may occasionally be seen in Rajputana erected to mark the site of a *Sati*, recalling the fact that the dolmen is used as a memorial of the dead by the Munda of Chota Nagpur, while by some Assam tribes the upright monolith and recumbent dolmen are used to correspond respectively to the male and to the female sexes. A reference to Volume IX of the Bombay Gazetteer definitely confirms the supposition that the Rajput memorial stone has the same origin as the Naga or Khasi menhir. Unhewn stones (*khatra*) or carved stones are raised, we learn, by most classes of Hindus in Gujarat for deceased persons, sometimes for all, but more particularly for those that have died a violent death* or been remarkable

* The Census Superintendent of Madras may be conveniently quoted here on similar practices in South India :—

> "*Pudams* or shrines exist to which no priests or temples are attached and the prevailing worship is in fact a kind of goblin propitiation, the goblins being usually the spirits of persons who died a violent death. Animal sacrifice and frequent admixture of human blood are commonplaces in their ceremonies. One such shrine in Tinnevelly district is to the spirit of a European killed in the Travancore wars and the offerings made are of articles considered peculiarly acceptable to one of his race, bread, fowls, cheroots and brandy.....In effect the real religion of the presidency, in the south, at any rate, is directed rather towards shrines and saints than towards deities."

for their holiness*. These stones are sometimes placed in a shrine, sometimes under a pipal tree. Until the shrine is set up the spirit of the deceased is dangerous. We may perhaps infer that the reason why such stones are set up, particularly for persons whose spirits are likely to be dangerous, is in order to appease them by providing an abiding place for them and so conforming to an ancient custom otherwise liable to be foregone. The carved stones take the ordinary form of a Rajputana or Kathiawar memorial stone or may be replaced by " a bust of black marble, brick or wood " but it is significant that they are worshipped by the newly married, or by a bridegroom on the way to fetch the bride, recalling the ceremony performed by childless Konyak Nagas on their phallic stone skull cists, and the practice of barren women to strip themselves at dawn and embrace naked the stone slab carved with the image of Hanuman†. At certain temples in southern India barren women are or were seated astride a particular stone to get offspring, success depending upon the experience of an orgasm while in this position. In the Punjab hills again, Chamba for instance, monoliths, or wooden substitutes, are put up for the dead with feasting on a great scale, and for the sake of acquiring merit. A rough effigy of the deceased is usually carved on the stone and the wooden substitute sometimes has a hole and a spout for water, when it is set up in the stream beside which it would otherwise be placed. Sometimes a circular stone is placed on the top of the monolith (recalling the former Khasi practice) and in the case of ruling families (*e.g.* of Mandi and Suket, where the practice is confined to royalty) the wife and concubine of the deceased are also represented on the stones as they are by Assam hill tribes. The Malayarayans of Travancore make a metal effigy of the



Memorial stones in Chamba State placed in a water course.

dead and put it into a miniature cist of stone verticals and a capstone which is erected on high ground and worshipped annually. Even the method of transporting

*" The spirit of Muhammad even is said to inform one granite pillar in Tinnevelly where daily " puja " is done by Hindu votaries. Vows are made to it by Hindus who flock to seek cure of disease, rain and other boons. Ganja and cheroots are the form the offerings take, these being considered peculiarly attractive to Muhammadans " (M. W. M. Yeatts, *Madras Census Report*, 1931).

† One may compare with these practices that of embracing a certain pillar in the church of the Virgin at Orcival in Auvergne or sitting in the chair of St. Fiacre in the church of the village of that name, the stone seat of which, like the pillar at Orcival, had the power of rendering barren women fertile. It was necessary, however, that there should be no garment between the stone and the sitter's body. Similarly in the chapel of St. Antoine de Paule at Saragossa there was a tombstone on which barren women lay in order to become fruitful. (Dulaure, *Des Divinités Génératrices*, page 251).

megaliths seems to have left traces in western India. The Nagas, like the people of Nias in the Indian archipelago, transport megaliths on wooden sledges made from the forked trunk of a tree which are dragged by very large numbers of men pulling on cane or creeper ropes. In the case of the Naga at any rate an essential implication of the ceremony is the infection of the village with the prosperity of the celebrant, and when the ceremony is performed with wooden instead of stone emblems these emblems are formally dragged all round the village with this express purpose. Very suggestive of a degenerate form of this ceremony is the village festival (*ghasbavji*) in Rajputana at which the "god", consisting of a large waterworn boulder, is dragged round the village on a sled made out of a forked tree trunk. Probably of similar origin also is the general veneration paid to stones throughout India, particularly of course to those of queer or unusual shape. Crooke (in *The Religion and Folklore of Northern India*) gives a very large number of examples which it is unnecessary to recapitulate, but it may be recorded here that a suit was argued in the Calcutta High Court on the 25th of April 1929 about a stone about 5 feet square, apparently of black slate or marble from Jaipur, which changed hands for Rs. 10,000 (£750) as being "very efficacious in the matter of getting a son". The suit arose because the stone failed to function, and it was stated in evidence that numbers of even quite well-educated Hindus believed in the efficacy of stones of this kind when used with the correct rites, and that so much as a lakh might be paid for such a stone. It was also mentioned that sitting on a stone is an essential feature in many Jain rites.

It may here be urged that the reverence and superstition paid to stones in general, is not, as Crooke suggests, a vague supersitition which develops into the use of memorial stones but on the contrary is the degenerated remnant of the life-essence fertility cult. The use of a stone or mere pebble as a *pretyasila* "stone of the disembodied spirit" by Hindus in western India seems a definite instance of this process of decay. The stone is picked up by the chief mourner at the place where the corpse was put down and is anointed with oil (recalling the baetyls of Naga fertility cults), a crow is induced to eat corn scattered about it and the pebble is then thrown into running water or kept among the household deities. Similarly the Komati caste of Mysore invokes the soul of the deceased to enter a pebble temporarily, while the ashes of the deceased are cast into a sacred river or some other water. It seems therefore much more likely that a veneration of stones on account of the indwelling soul has been transferred to peculiar stones in general on account of similar possibilities, than that a vague reverence of stones should exist without reason and be elaborated into a coherent creed which really turns on a belief in the power of soul-matter to promote the fertility of nature. An extension of the same idea would seem to appear in the practice of requiring spirit or soul-matter of the dead to impart permanence or, to use our own metaphor, "life" to buildings. This practice is referred to as that of foundation "sacrifices", but the idea of sacrifice, if present at all, is clearly later than the practice itself, which is essentially of the same origin in India, where at least a belief in the necessity survives, and in Oceania, where in Fiji and in the Marquesas, for instance, human sacrifices were required to invest a building or a canoe with the necessary *mana*. This belief is still so prevalent in India as to be the cause of a good deal of disturbance from time to time. In 1922 the Deputy Commissioner of Dibrugarh had to issue a notice reassuring people against *mur katas* (= "headcutters") coming to kill or behead male children for some unkown purpose and to threaten with prosecution anyone assisting to spread the rumour. In 1923 on the 27th May a riot took place on Cinnamara tea estate on account of a scare about the kidnapping of children for the foundation of a new bridge. In June 1924 a rumour in Calcutta that the Port Commissioners were seeking for children to bury in the foundation of the new Kidderpore dockyard led to Punjabi taxidrivers being killed in the belief that they were agents decoying children for this purpose, and in the same month strangers in Patna were maltreated in connection with a similar scare about a bridge in Bihar. In 1926 in north Lakhimpur there was a rumour that *arkas* (*i.e.*, head-takers ?) were trying to obtain children's heads for the construction of a railway bridge. In the same year the district engineeer constructing the recent bridge on the Sibsagar Road-Khowang Railway had trouble from a kidnapping scare, which was so much intensified when a retaining wall burst that schoolboys asked leave in order to stay at home for fear of being kidnapped on their way to school. Several petitions were filed in the

S. D. O.'s office, also against suspected kidnappers, while villagers insisted on visiting and counting tea-garden coolies during the night in order to assure themselves that they were not concealing victims in their lines, and a number of assaults took place, one serious. In July of the same year there was a scare in Cachar that a human sacrifice was required for the oil-borings to promote the flow of oil in the Burmah Oil Company's wells. A strange coolie was roughly handled on the 12th of that month in Cachar and a stranger from Sylhet was beaten and confined on the same suspicion on the 10th. In January 1929 a rumour in Bombay that children were being kidnapped for the construction of a bridge in Baroda led to an attack on Pathans, and on a Greek engineer, to the death of a Hindu carpenter and ultimately during two days time to the killing of 17 Pathans while two other Muslims and three Hindus were killed in the consequent affrays, very many other persons being injured. In the subsequent riots 149 people were killed and the damage to property came to at least 5 lakhs of rupees. In May 1929, in Bihar again this time, a man was beaten to death in the belief that he was seeking to kidnap a child as a "foundation sacrifice" for a bridge at Jamshedpur, while the floods in the Surma valley of the same year led to a scare that children were being kidnapped for the reconstruction of certain embankments in the Manipur State. In certain tribes of the Naga Hills in Assam a live chicken is still placed in the hole dug for the main house post and the post stepped on to it, while it is asserted that certain transfrontier tribes use a human being thus, as formerly in Fiji, "to hold up the post". The same idea is to be seen in a practice attributed by Mr. S. N. Roy, (in *Man in India*, IX, page 272) to Bengali boat-builders who have had to dispute their dues with a customer; a few drops of the ship-wright's blood are plugged into a cavity in the planking, when the boat acquires a malevolent vitality, drowns its crew and continues an independent existence as an aquatic phantom. A sword used in sacrifice acquires a similar vitality from the blood of the victims it decapitates, and like boats it is furnished with eyes painted in vermilion.

It has been already indicated that the soul is often conceived in the tribal religions of India as having the form of a manikin and being located in the head, and though this conception is apparently at conflict with the theory of soul-matter or a material life-substance it is held concurrently with it without any consciousness of inconsistency. There is nothing remarkable in this, but the question arises whether these two conceptions are of different origin or may have come into being from the same source, and it is here submitted that the conception of the soul as a manikin is merely the effect, on a rather vague conception as to the nature of life, of that tendency towards anthropomorphism which is inevitable when man is to conceive of a material with some of his own attributes and no known shape and which is apparent in the conception of the deity in the great majority of religions. The Karen of Burma have a doctrine of a material substance which is the cause of life, or rather which is actually life itself, a sort of ectoplasm of life, which leaves the dying body to enter the herbs of the field or the seeds of the earth, and which then passes through grass into cattle and through grain, or indirectly through the meat of grazing animals, into man and passes through the seminal fluid to generate fresh life, precisely as if it consisted of carbohydrates*. This doctrine may perhaps be regarded as having arisen very early in the history of mankind as a natural result of speculation as to the cause of the change that takes place at death and as to the nature of that which has left the body. Speculation of some kind would be inevitable, if only as a result of the natural curiosity required by any animal, human or otherwise, to adapt itself to environment in the struggle to survive. Abstract ideas come late in the development of a language and presumably therefore late in the development of thought, and hence the necessity, before any philosophic idea of life can be framed, of regarding it as a material substance and of thinking of that substance as taking some form. The idea then of a manikin living behind the forehead whose movements are registered on an infant's fontanelle is a not unnatural symptom of the development, or degeneration, of the life-substance theory and may perhaps be traced in that doctrine of the Vedanta school of Hindu philosophy which regards the soul as encased in a series of sheaths the interior of which accompany the soul on its migration while the exterior constitutes the material body; and the location

* It seems certain that the strange provision in the Brahmanical code which makes the Telis an untouchable caste (but not the Tili, who only sells not presses oil) is due to their practice of destroying the seed in the pursuit of their occupation without provision for its transfer to another living organism, a suggestion confirmed, I think, by Manu, *iv.* 85.

of the soul in the head is illustrated by the Hindu belief that it escapes through the "crevice of Brahma", through which ascetics can project their soul (and so die) at will, while for less holy persons it is necessary to fracture the skull with a conch shell to let out the soul. The *salagrama* held to the aperture perhaps served the same purpose as the *pretyasila* mentioned above. One is also reminded of the story in the Aitareya Brahmana (*vide* Rajendralala Mitra, *Indo-Aryans*, II, 76) of how the gods killed a man for their sacrifice, but the part in him fit for an offering went out, leaving him deformed, and entered a horse, and so on through an ox (which turned to a gayal when the fit part left it), a sheep and a goat and entered the earth, where the gods surrounded it so that no escape was possible, when it turned into rice. Father Schmidt considers that in India "the materialistic Sankhyan philosophy most certainly arose from matrilineal animism," and he suggests that the spiritual philosophies of classical Greece may have had at least in part a similar source. Having got as far as materializing our life principle, its conception as similar in feature to that of the body is inescapable, and the way is clear for the doctrine of reincarnation. The doctrine reached is logically irreconcilable with the theory with which we started but experience shows that the two can be held simultaneously, at any rate by primitive man, without any consciousness of inconsistency. There are probably, however, steps by the way which contribute to this belief—the idea of the soul coming back as an insect is one, and one to which the conception of the soul as able to leave the body and flit about at night, derived in part no doubt if not entirely from the phenomena of dreams, has contributed. As instances the Lhota Nagas of Assam and the Kunbis of Bombay and the Kamis of Bengal may all be quoted as watching for an insect after a person's death, or the Ahirs, Kamars and Gonds who go to a river and bring back an insect or a fish as containing the soul and sometimes, in the case of the Gonds at least, eat it to ensure its rebirth. Another contributory observation to the insect notion is perhaps the mysterious way in which large numbers of insects appear from nowhere in particular, as if caused by superfluity as it were of life-substance, an idea which would have been comprehensible enough to the ancient world, which regarded for instance insect life as spontaneously engendered in dung dropped under a waxing moon, etc. (*vide* Pliny, *Nat. Hist.*, Bk. II), or which regarded the Nile floods as pouring soul into the sods so as to fashion live creatures from the very soil (*Nilus.....glaebis etiam infundat animas, ex ipsaque humo vitalia effingat*—Pomponius Mela, I, 52), bringing us back again to that fertility cult which associates soul with water. Similarly Diodorus Siculus (I, *i*) says "moisture generates creatures from heat, as from a seminal principle" and a little further on "they say that about Thebes in Egypt, after the overflowing of the river Nile, the earth thereby being covered with mud and slime, many places putrefy through the heat of the sun, and thence are bred multitudes of mice. It is certain, therefore, that out of the earth.....animals are generated". These ideas of life in dung and water seem to have been combined in the practice which so disgusted the Abbé Dubois at the temple of Nanjanagud in Mysore some 150 years ago. Barren women and their husbands were described by him as drinking out of the temple sewer from hands soiled by setting aside a portion of the ordure to be examined a few days later whether insects or vermin were engendered in it, which was regarded as "a favourable prognostic for the woman". The same belief probably accounts for the practice of throwing dung at a bridal pair, a practice common for instance in the Assam Hills. Whatever be its origin, however, a vague belief in reincarnation is common to most of the tribal religions in India and is generally associated more or less with some degree of ancestor worship, a tendency to which is everywhere apparent. This reincarnation belief is to be seen very clearly in the ancient Brahmanic theory that after the birth of a son the sexual relationship of husband and wife should cease, since the son is the father's self and the father's wife has become his mother also. It is stated of the Kochhar sub-caste of the Khatri, a trading caste of the Punjab, that a father's funeral rites are performed in the fifth month of his wife's first pregnancy, which points to the same idea. The Bishnoi of Hissar bury an infant at the threshold that its soul may re-enter the mother and be born again. Among the Bhuiyas every child is regarded as a reincarnation of some deceased relative, while the Mikirs, it may be noticed, believe in reincarnation except for the souls of those who have been killed by tigers. Among the Lushei the reincarnated soul sometimes appears as a hornet, sometimes as dew and in the latter form the belief is hardly distinguishable from the Karen theory

of life substance. So again it is a common practice with the tribes mentioned that while a dead grandfather's name or that of another ancestor must be given to a child, the name of a living ancestor shall not be given as either he or the new born child will die. The practice was perhaps similar in ancient Indian society as in old lists of kings it is common to find a grandson named after the grandfather. This practice seems, however, to have changed as the name of any ancestor living or dead is reported now to be avoided by Hindus.

The association of reincarnation with the soul fertility cult is perhaps confirmed to some extent by Malcolm's record of the practice of jumping off certain high rocks in Central India in order to be reborn in a royal house. Forsyth (*Highlands of Central India*) also records the account of an eyewitness, Captain Douglas, Political Assistant in Nimar, of a scene at Omkar, a shrine of Shiva on Mandhatta island in the Narbada, at which a young man leaped off a rock 90 ft. high to his death in 1822, and mentions a later case of an old woman who hesitated and was pushed over. In the case of this rock apparently if the jumper survived, he was killed by a "priestess" with a dagger, but in the case of another of these rocks if a man survived the fall he was made Raja and the association between the soul and the fertility of the land impinges on that between the fertility of the land and the king as the living receptacle or embodiment of the life-spirit, and one which must not be allowed to grow old. One is reminded, however, by this habit of jumping off a cliff to royal incarnation of a number of similar practices associated in each case with the fertility of the soil.* Thus rope-sliding (*beduart*) in the Himalayas would appear to be a definite survival of a similar form of voluntary or involuntary human sacrifice. The slider, an acrobat or dancer (*beda*) by caste, is worshipped as Mahadeo, bathed in milk, dressed in new clothes, and carried round the village fields before the ceremony, which is resorted to when harvests have been bad. That this is a survival of human sacrifice is clearly indicated by the fact that both the rope used and the hair of the slider are distributed as fertility charms while the slider himself becomes infertile, for his fields go barren and the seed he sows fails to burgeon. He is in fact spiritually dead† and his life-matter has been distributed to his neighbours. We are recalled to the Kondh *meriah* whose parent was consoled by his neighbours in words which Macpherson has recorded—"Your child has died that all the world may live". It is worth remarking that the hereditary caste of rope-sliders is the Nat caste and that the women of that caste are associated in many parts of India with dancing and prostitution. Both are probably closely connected with fertility rites and it may be that the professions of tight-rope walker, acrobat, dancer and prostitute take their origin in services performed primarily for the benefit of the crops. In former days it is said that the slider who fell off the rope was cut to pieces at the bottom, and the rite as a whole suggests a chastened form of human sacrifice in which it was essential that the victim should fall from a great height. It recalls insistently the ceremony described as practiced at the temple of the Syrian Goddess where from a very lofty porch between two gigantic phalli the animal or sometimes apparently human victims were hurled to the ground and where worshippers let their children down in a sack aft er branding them (*cf. supra* p. 403) as devoted to the deity. In the northeast corner of India the Angami Naga still hurls from the roof of a house his sacrificial victim, a puppy dog invested with the symbolic attributes of a man, while a calf released below is literally torn to pieces by the crowd. Meanwhile ashes representing clouds and cotton seeds representing hail are thrown by the priest from the roof, clearly showing that not only is a distribution of the victims' life-essence involved but a fall of fertilizing water probably intended to be magically ensured by a fall of the victim from above.

One phenomenon of primitive religion which cannot be ignored when writing of India is totemism, traces of which are shown by primitive tribes in all parts of India and by not a few castes that have reached or retained a high social position. From the Bhils in the west to the Wa of eastern Burma; from the

* Tod (*Annals*, XI, ch. iv) says "love of off-spring" is the motive, but he does not explain and one is almost inclined to suspect him of facetiousness.

† Like the Maithil Brahman mentioned by Wilson (*Indian Caste*, II, 194), who was outcasted by his family because he recovered after his funeral ceremonies had actually been performed in expectation of his decease, and like the Bhil referred to above (p. 1) who dies within a year of the use of his blood to anoint his lord as king.

Kanets of the Simla hills to members of Telugu castes of southern India, clear traces of totemism are found to survive, and it is needless here to go into details already sufficiently well-known and recorded. It may be enough to recall "the longtailed Ranas of Saurasthra", Jethwa Rajputs who claim descent from Hanuman, and the ruler of the Malabar coast whose death involves abstention from fishing lest the soul-inhabited fish be captured, to show that totemistic ideas are not entirely confined to primitive tribes and to castes low in the social scale. Various theories have been put forward to account for totemism of which the most satisfactory is Sir James Frazer's "conceptional" theory. His position, put briefly, is that a period must have existed in human history when the function of the male in producing offspring was as yet unrecognised; consequently the female on consciousness of conception sought for a cause to explain the phenomenon and attributed it to some animal or plant. Clearly we need not, indeed cannot, suppose that the existing beliefs of the Australian tribes, on which Sir James bases his diagnosis, represent the belief in totem birth in its original form, and assuming that his theory is correct we may probably imagine conception as first attributed to something eaten, touched or even merely seen by the conceiving woman. Granting the coexistence of the soul-matter theory of life and death and the inclusion in that theory of plants or fruit, it would be easy to speculate as to the source of the new life within the womb from soul-matter taken in food. In any case ignorance of paternity can hardly have lasted for a very long period in most branches of the human race, and in the well-known instance of the Trobriand Islands Moubray (*Matriarchy in the Malay Peninsula*, p. 53) has plausibly argued that the Trobrianders' emphatic denial of the father's share in procreation is the result of a decay of society starting from the point of development at which matriliny was about to swing over patriliny. Be that as it may, it is obvious that once the idea of totemism be started it would be kept alive and fed by ideas and sentiments not adequate in themselves perhaps to start the theory. The psychological considerations sometimes urged as causes of totemism cannot be regarded as the actual causes since ideas must have some ultimate reference to observed experience, but they will contribute to the retention of an idea which would not otherwise survive.

Frazer himself has pointed out the theory of the external soul as apparently responsible for some forms which, if not actually totemism, resemble it so closely as makes no matter; and while it has been recently argued by an American anthropologist that totemism arises from food restrictions, others have traced it to theories of the transmigration of soul. Bullock (*Man*, *XXXI*, 185) regards totemism as developing subsequently to exogamy and as being merely the machinery by which exogamy is implemented. This conclusion is based on a study of the institutions of the Mashona, where, he says, "the connection between totemism and exogamy is undoubted". This, however, does not prove that such a connection always existed, since no society is in a static condition and an accidental coincidence may easily develop into a coalescence. Durkheim with greater plausibility (*L'année sociologique*, vol. i) regards totemism as the cause of a taboo on incest and consequently as the cause of exogamy. It is simplest, perhaps, to accept Frazer's view of the origin of totemism and to regard the other explanations as having contributed to extend or support the belief after a period at which the observation of the fact of paternity would otherwise have put a natural end to it. If it so happened that exogamy originated at an early totemic period of the human race, it is natural to find it surviving where totemism survives either in some semblance of its earliest form as a conception theory or in a developed form into which other beliefs have entered. Such a view of totemism also agrees with the extreme variety of its manifestations, ranging from the sacramental consumption of the totem or its use for magical augmentation of the food supply, to the merest peg for exogamy to hang upon, and it is in the latter form that it is commonest in India where it has generally decayed into a mere totemistic clan name. There are, however, traces of taboos and beliefs essential to it at an earlier stage. Some tribes with what appear to be totemistic clan names no longer regard them as such. Thus the Thevoma clan of the Angami, Nagas and the Awomi of the Sema would appear in both cases to bear names translatable as "Pigmen", but no such meaning is ascribed by the Angamis, who explain the name as a human patronymic, while the corresponding Sema

clan gives an adventitious explanation of an ancestor who was bitten by a pig; on the other hand the Ao Naga neighbours of these tribes have a dog clan which still claims canine characteristics, *e.g.*, speed of foot and doglike features*; moreover they taboo the dog as food or rather used to taboo it until recently they found it desirable to break the taboo in order to benefit by the medicinal virtues of dog-flesh. Another Ao clan again, the Wozakumr—Hornbill people, claim descent from a woman who conceived as a result of a feather dropping in her lap from a hornbill flying overhead, and it is taboo for them to kill a hornbill or even to see a dead one. It may likewise be noted that the Hindu Chasa of Orissa regard the injuring of their clan totem as punished by leprosy, a fate which the Brahman regards as caused by killing a cow.

Into this conception theory of totemism the belief in life-matter seems hardly to enter unless it be perhaps to the extent that the supply of totem soul is limited and is continually passing through death and rebirth from one member of the clan to another. This appears to be the case in Australia but it is not reported of any tribe in India. On the other hand the external soul, which seems to be a development of the life-matter belief, does appear as connected with totemism in India much as it is in parts of Africa. As a possible source of the connection between totemism and the external soul the phenomena of birth may be suggested. The afterbirth is well known to be intimately associated with the idea of the external soul and is regarded in some cases as actually containing it. Thus among the Baganda it is buried under a plantain tree and a woman may conceive if pollinated, as it were, by the dropping on her of a plantain flower. In the case of the chief, however, the placenta is carefully preserved and brought to him to handle and return to safe keeping on state occasions. Here we are reminded of the placenta standard on the palette of Narmer. No doubt as the abode of the king's vital essence the proximity of such a standard in time of danger would be useful and if the standard be the abode of the external soul we have the explanation both of the association of totems with standards and the apparent paradox of taking into danger a very highly prized emblem the capture of which is regarded by the enemy as of great significance.† One may recall the Fairy Banner of the McLeods which not only brings victory but causes a cow to drop her calf or a pregnant woman to give birth on the sight of it. It may be inferred that its quickening property is due to its being the seat of external soul-matter.‡ If the placenta be thus regarded as the location of the external soul, a possible origin of totemism at once suggests itself in the possibility of the placenta being devoured by some scavenging animal or bird or being associated with the tree on which it is placed for security or with some plant which springs up on the spot where it is buried. It is necessary of course to postulate a subsequent transfer of the totem from the individual to the exogamous clan descended from him or her, but such an origin would perhaps account for a purely social form of totemism in which there was no sacramental element and no magical food production. It would also account for a soul-transmigration form of totemism.

It is worth while in this connection to draw attention to the case of the plantain tree as deriving Baganda soul-matter from a placenta at its root in Africa

* In the Nicobars where descent is claimed from a dog and a woman the dress of men is said to be intended to simulate a doggy appearance, consisting of a fillet round the head with two ends sticking up from the knot on the forehead to resemble dog's ears, while the private parts are concealed in a blue bag with a long red point to it, and the waist-band is arranged to fall down behind in a tail.

† The earliest Roman standards are said to have consisted of a bundle of hay on a pole. Can it have been held that such a bundle of hay would be, like a growth of mistletoe, a convenient hiding place for external soul matter, just as the Kayan leaves the leafy tops of trees unpruned in order to afford a refuge for the spirits of vegetation when clearing the fields? It might be that the same idea was present in the bandaged pole which on an Egyptian temple represented the god, the hieroglyphic for which resembles a flag though it is described as a hatchet and stated to be in effect a bandaged pole with a loose flap projecting.

‡ Strasser (*The Mongolian Horde*, p. 104) relates that the Tashal Lama of Urga in Mongolia "pressed his standards to the slit throats of his victims, saturating them in their spurting life blood." One is tempted to see in this an attempt to imbue the standards with soul-matter which would no doubt contribute towards their victorious progress.

and as being used as the equivalent of a human being in Assam and Oceania.* Thus a "plantain tree" is in many parts of the Naga hills an euphemism for a slave for decapitation. The same equation appears in Micronesia, Fiji, Polynesia, Madagascar and nearer home among the Palaungs of Burma, with whom the tree is also an emblem of fertility, while it is frequently a plantain tree which is used in India in the mock marriages sometimes performed for elder children to enable their juniors to be married before them. A close parallel to the Baganda theory of conception from a plantain flower is to be found in India in the Muslim belief that a woman may conceive if the flowers of a rose tree or jasmine which is growing from the tomb of a dead saint should fall upon her. One may also call attention to the existence in the case of the Ho of a clan whose peculiar totem is the hole of a mouse or rat, a totem immediately explicable on the placenta theory when one is informed that the tribe is descended from a person whose placenta at his birth was buried in a rat hole. The same placenta theory perhaps also appears in the Kora story reported by Risley from Bengal to account for the fruit of a certain tree's being taboo to the tribe since their ancestor once accidentally ate a human placenta which had been exposed in a tree of that particular variety.

Another origin of totems has been suggested as likely to be found in food restrictions. We should be inclined rather to put it the other way round and regard it as perhaps to be found in peculiarities of diet. The discovery and search for forms of vegetable food must have held a very important place in early domestic economy. Under any conditions in which food was scarce and its collection uncertain and laborious, as is probably frequently if not normally the case in a pre-agricultural stage of existence, there must have been a tendency to conceal as long as possible the source of some hitherto unknown supply of food lest that supply be exhausted by other gatherers. Experiment in strange vegetables is dangerous, particularly in the tropics. It is therefore suggested that to the discovery and communication to the kindred and concealment from other clans of new forms of vegetable food must be ascribed the importance of certain wild vegetables in clan ceremonial among the Naga tribes of Assam. The test of whether a clan in one tribe is to be identified or not with a clan in another tribe speaking a totally different language often depends on the vegetable used in certain ceremonies. If the identical plant is used the clans would be regarded as related and clansmen of one tribe going on a trading expedition into the territory of another will feel secure in a house of a related clan, whereas otherwise they would lie down, if at all, in fear of being awoken from their slumber by the sharp *dao* of decapitation. It is true that the wild vegetables used in these clan ceremonies are not always regular articles of food, but it is the writer's impression that they are always edible. Here surely is another possible source of ideas leading to the adoption of a vegetable totem by a given clan.

It is not argued that all totems are accounted for directly by any of the ideas suggested above. Pigs' tripe, for instance, will not quite fit, though we might perhaps suppose a fragment to have got left in a pot in which an afterbirth was hung up; buffalo dung is harder still, unless dung be regarded (*vide supra* p. 410) as a source of spontaneous life. It is, however, likely from every point of view that totemism in general has received accretions from a number of sources, and that while it may have originally started with the conception theory in ignorance of the fact of paternity, it has been encouraged and perpetuated by the ideas of life-matter, a separable soul, transmigration and probably other connected ideas, and that a number of these have contributed to totemism as still found in India.

Magic, when limited to purely imitative or sympathetic magic, is rather within the domain of science than religion. There is nothing religious at all about the effort of an Ao Naga to influence the rice by planting a root or two in earth put in the hollow top of a bamboo, and so raised above the rest of the field which is thus induced to grow high; in the rather inconsiderate Kuki plan of putting a bug into the bundle of the departing guest in order that the rest of the vermin may leave the house likewise, or in the custom of giving a Prabhu bride a grind-

* *Cf.* also *Census of Nigeria, 1931.* VI, 7—"It is said that some of the Yoruba eat the placenta.....In the Cameroons it is usually buried under a plantain tree and the fruit is henceforth taken by the native doctor and later by the child".

stone to hold which she gives to her husband saying " take the baby ". When however the efficacy of such magic depends not on the practice but on the practitioner, we may suspect that the idea of soul-matter is present and that it is, often at any rate, the superfluity of this material that enables the magician to make his magic successful. Here again one may perhaps see the reaction of the simple belief that like produces like to an independent belief in the existence of soul-matter. However, that may be, a belief in magic both white and black pervades all the more ignorant classes in India and is frequently responsible for serious crime, nor is it always eliminated by culture and education, as witness the comparatively educated persons frequently victimised by rogues who profess to be able to double currency notes miraculously. Thus, to give a single instance, in May 1931, a well-to-do merchant of Indore imprudently handed over Rs. 2,800 to one Pandit Sri Krishna who claimed to have a marvellous process of doubling notes. Ignorant villagers are much more easily imposed on, as in the case of a village near Multan in the Punjab which about the same time parted with Rs. 15,000 in cash and ornaments to a Muslim Fakir who first called down a few rupees from heaven to inspire confidence in his piety and miraculous powers, and then professed to be able to turn silver ornaments into gold or one rupee into three. A belief in magic again, for it can hardly be described as anything else, even if it involve the theory of the impregnation of matter with soul-essence, appears in the practice, reported on good authority in Rangoon, of a director of an international trading corporation who, when ill, has sewn into the seat of his pyjama trousers by his Catholic wife a pious fragment of the holy St. Theresa's petticoat. What the effect on a male Naga would be of wearing a piece of any woman's petticoat, however saintly, we hesitate to set down in print, but presumably Herr Direktor experiences benefit.

Often a belief in witchcraft leads to the murder of the reputed witch. In 1928 in Bihar for instance nine cases of murder were ascribed to witchcraft, and in 1931 in the Yarpur mahalla of Patna a small Lohar girl was murdered in retaliation for the supposed enchantments of her mother, while an " aboriginal " woman suspected of being a witch was killed in Ghatsila district. In Fyzabad in 1927, a man was killed on the advice of a medicine man as being the cause of another's prolonged dysentery, and in Budaun a chamar who was suspected of having bewitched an idiot of good family was pegged out and periodically belaboured while the bewitched one was watched for improvement in his condition. Ultimately, as there was none, the chamar succumbed. In July 1920 a mob in the Nizam's Dominions killed a woman who was believed to have brought cholera on the village, a belief arising from the hysterical statement of a possessed woman into whom had entered the spirit of the goddess who was being worshipped at the time by the village. In November 1930 in Gonda in the United Provinces a wizard was murdered by his own pupil in the belief that he, the wizard, had caused an evil spirit to destroy his pupil's wife and would cause it also to destroy him himself, and as the pupil was one of ten years' standing this instance testifies to the wizard's belief in his own system.

On the other hand the witches themselves likewise commit murders for their own ends and to that extent anyhow justify their persecution. A boy was sacrificed in Bhagalpur in 1928, for the purpose of exorcising evil spirits from a possessed woman, while on the eve of the Dasehra festival of 1930 two sorcerers of Sambalpur, described by the High Court as " men of standing ", sacrificed a boy for some nefarious purpose of their own. This case however may possibly have been one rather of a homicide of the kind alluded to above as occasioned by the belief in the need for soul-matter. The use of human sacrifice in order to exorcise spirits is probably unusual, as it is commoner to treat the body of the possessed by more direct methods. Indeed a Hindu girl was beaten to death in Lahore in November 1929, in the attempt to cure her of possession, and this apparently at a shrine frequented by persons in order to experience possession by the deity. In view however of the extent of illiteracy and of the population concerned, the amount of violent crime actually due to a belief in witchcraft appears to be unexpectedly small, though naturally apt to increase with the appearance of calamities or epidemics, which are ascribable to the malevolence of witches, and in Chota Nagpur there are professional witch-doctors called *sokha* whose business it is to indicate the witch responsible for calamity or epidemic that has occurred.

Personal magic, however, is not the only form in which magic appears. Tribal magic, in which the community combines, usually at some festival, in rites or dances intended to secure fertility or prosperity, is a normal feature of tribal religion. Such festivals or rites are usually associated with the agricultural year and may involve sexual licence which is probably intended to have a magical effect on the fertility of the crop and of the community itself, and no better instance of such a festival can be quoted than the *holi*, which has survived as a Hindu festival throughout India.* It is tempting, if possibly fanciful, to trace the origin of the widespread belief in the magic effect of coition on the fertility of the soil, of animals and of people in general to a period in human history when the relation between cause and effect in the begetting of children was not yet fully comprehended, but when the two were already seen to have some association, so that what was really the cause of the conception of one particular child was regarded as merely the cause of parturition in general.† Such a stage in the process of deduction from observed facts, if its existence be credible, would account for the common practice of assisting the fertility of the crops by the act of sexual coition. A reference has already been made (*v. supra* ch. VI. para. 102) to the probable connection between fertility cults and the practice of sacred prostitution. An explanation may here be offered of the peculiar part played by strangers in this cult. Both in the sacred prostitution of Babylon and Byblus it is clear that the dedicated woman gave herself to strangers; similarly it was commerce with strangers which was so necessary to the fertility of the fields of Kamul and so contributive to the prosperity of the people of Caindu. Yule mentions the custom as reported of the Hazaras and of other peoples, including even the Nayars (*Travels of Marco Polo*, I, 212, II, 56). It seems not unlikely that the underlying motive is the acquisition from the stranger of additional life-matter not already inherent in the soil or its inhabitants. The soul-matter of any given place may be regarded as limited in extent and the transfer from one individual to another merely redistributes but does not increase, whereas the reception of soul-material from a stranger is additional to that already in circulation and will naturally therefore increase fertility. This hypothesis likewise offers a possible explanation of the custom mentioned by Gait of the Todas (*Census of India*, 1911, I, p. 260), who are reported to call in a person from another village to deflower a girl about to attain puberty, who otherwise finds it difficult to marry, and perhaps also of the *talikettu* ceremony in south India generally. A possible association of the distribution in India of the brachycephalic Eurasiatic type with the practice of infant marriage has already been suggested (*supra*, ch. VI, para. 102). The fact that approval of commerce with strangers, which is perhaps associated always with the fertility of the soil, is reported of the Uighars, Hazaras, Chukchis, Koryaks (*vide* Yule, *Travels of Marco Polo*, I, p. 212 n., II, 56 n.), and (by a Xth century Arab traveller) of some Turks, makes it possible that this custom also has Alpine associations. Dancing likewise has probably a magical origin, and it certainly has a magical aspect as when it involves leaping up in the air to encourage the growth of paddy, and Russell has acutely suggested that acrobatic displays have originated in the same idea. Similarly animal dancing, such as that for instance of the Gonds, Bhatras and Parjas of the Central Provinces, probably originates in an attempt to increase or perhaps merely to concentrate by magic the wild animals on which the community partly depends for its food supply. When, however, the spring hunting is considered, it is apparent that the soul-matter cult is again prominent. The *Aheria* of the Rajput in western India, the hunting festival of the Halvakki Vakkals in Kanara, the *Jur Sital* of Bihar,

* Unless it be the marriage festival annually celebrated in June by the lord of a feudal manor in Normandy who after participating in the bridal festivities of his serfs picked out the couples who appeared to him to be the most amorous, and caused them to consummate their marriages in the boughs of trees or in the waters of the local river. Dulaure speaks of this practice as one of tyrannical jesting, but the interpretation here assumed is perhaps more likely. Fertility rites survived in Europe in spite of the Church;—"*le femmes prostituées.....qui suivaient la Cour.....étaient tenues, tant que le moi de mai durait, de faire le lit du roi des ribauds*" (Dulaure), and sometimes even under its auspices as at Isernia.

† I have heard a Sema chief of great tribal authority and experience, Inato of Lumitsami, affirm that it was ridiculous to suppose that pregnancy would result from coition on one occasion only, which indicates that even now the relation between cause and effect in this particular is not completely grasped in that tribe.

the spring hunt of the Chota Nagpur tribes, and of the Bhatras, Gonds and Gadabas of the Central Provinces and Madras, the *Sekrengi* hunt of the Angami Nagas and the corresponding festivals of other Assam tribes are all designed to secure prosperity through the coming year, and inasmuch as all manner of living things are destroyed they are probably intended (the *Sekrengi* certainly is) to collect a supply of life-essence and are to be regarded in much the same light as the spring man-hunt of the Wa of Burma.

It would be impossible here to go into all the aspects of the tribal religion in India but enough has perhaps been said to show that the beliefs held are not mere vague imaginings of superstitious and untaught minds, "amorphous" as they were described in the Census report of 1911, but the *débris* of a real religious system, a definite philosophy, to the one time widespread prevalence of which the manifold survivals in Hinduism testify, linking together geographically the austroasiatic and australoid cultures of the forest-clad hills where the isolated remains of the original religion still hold out in an unassimilated form. It is probably this philosophy of life-essence which accounts for the fact that in so many parts of the world, *e.g.* in India and southern and eastern Europe, Greece and Italy in particular, the real religion of the people is hagiolatry. It is less the orthodox gods of the religion who are worshipped than shrines and holy places, generally tombs particularly associated with some deceased saint or hero likely to have been rich in soul-matter, the benefit of which may be obtained at the grave, originally no doubt in the form of a material emanation. Be that as it may, showing traces in Europe on the one hand and stretching down into Australasia on the other, this creed must have been in its time a great religion, not so great perhaps in altruism, but great in extent and in constituting a very definite rung in that poor ladder up which the race still tries to climb in its effort to ascertain the unknowable, to scale the ramparts of infinity.

SUBSIDIARY

Proportional strength of the main religions in each Pro

Number per 10,000

Province, State or Agency.	Hindu.*					
	1931	1921	1911	1901	1891	1881
INDIA	6,834	6,841	6,931	7,034	7,231	7,432
Provinces	6,548	6,589	6,688	6,835	7,014	7,197
Ajmer-Merwara	7,755	7,326	7,750	7,977	8,054	8,162
Andaman and Nicobar Islands	2,586	3,254	3,578	3,758	..	..
Assam	5,720	5 433	5,418	5,578	5,472	6,273
Baluchistan	894	869	622	643	..	..
Bengal	4,304	4,327	4,480	4,660	4,727	4,855
Bihar and Orissa	8,231	8,282	8,223	8,333	8,290	8,430
Bombay	7,605	7,657	7,585	7,651	7,756	7,480
Burma†	390	*368*	*514* / 322	*436* / 272	*306* / 228	*236* / ..
Central Provinces and Berar	8,601	8,353	8,261	8,320	8,244	8,266
Coorg	8,939	7,733	7,939	8,849	9,063	9,113
Delhi	6,285	6,417	3,297	3,873	4,077	4,130
Punjab	2,684	3,064				
Madras	8,831	8,864	8,889	8,914	8,981	9,141
North-West Frontier Province	590	666	546	629	638	706
United Provinces	8,450	8,464	8,504	8,532	8,609	8,627
States and Agencies	7,771	7,742	7,788	7,769	7,957	8,277
Assam States	4,362	5,994	5,816	5,996	..	5,921
Baluchistan States	302	334	232	342	..	..
Baroda State	8,809	8,193	8,349	7,922	8,850	8,480
Bengal States	6,593	6,752	6,900	6,985	6,955	6,262
Bihar and Orissa States	9,017	8,684	8,589	8,624	8,627	8,245
Bombay States†	8,775	8,676	8,401	8,278	8,414	7,962
Central India Agency	8,823	8,688	8,830	8,081	7,468	8,422
Gwalior State	9,286	8,807				
Central Provinces States	7,202	7,308	6,195	6,802	7,386	8,621
Cochin State	6,477	6,599	6,706	6,826	6,938	7,152
Hyderabad State	8,435	8,545	8,693	8,860	8,941	9,033
Jammu and Kashmir State	2,019	2,016	2,183	2,371	2,720	..
Madras States Agency	6,400	6,642	6,903	7,111	7,456	7,467
Mysore State	9,174	9,168	9,199	9,206	9,248	9,308
North-West Frontier Province (Agencies and Tribal Area)	2,939	4,563	1,984	..	..	..
Punjab States	8,769	5,001	4,953	5,582	5,849	5,495
Punjab States Agency	4,220					
Rajputana	8,533	8,296	8,311	8,327	8,351	8,759
Sikkim State	4,287	6,673	6,674	6,491	..	..
United Provinces States	7,883	7,819	7,008	6,962	6,934	6,764
Travancore State	6,152	6,365	6,657	6,895	7,318	7,312
Western India States Agency‡	8,119	8,077	7,914	..	..	..

* The 1881-1921 figures for "Others" are inclusive of those for Aryas and Brahmo
† Figures for 1881-1901 for all the religions are inclusive of those for Western
‡ Figures for 1881-1901 are included in the

NOTE.—The *italic* figures against Burma relate to Lower Burma only. The figures for Tribal Religions are
The proportions in the case of Agencies and Tribal Areas of the North-West

TABLE I.

vince, State or Agency at each of the last six censuses.

of the population.

Sikh.						Jain.						Buddhist.					
1931	1921	1911	1901	1891	1881	1931	1921	1911	1901	1891	1881	1931	1921	1911	1901	1891	1881
124	103	96	75	67	73	36	37	40	45	49	49	365	366	342	322	248	135
118	96	89	68	64	63	17	18	19	21	22	23	468	465	436	406	391	172
6	4	18	6	4	4	348	372	405	418	497	528	..	..	..	..	..	..
220	144	172	150	..	..	..	..	..	25	..	..	988	979	604	755	..	..
3	1	1	1	..	..	3	5	3	3	2	..	17	17	16	15	14	14
181	182	128	85	..	..	1	..	..	..	..	..	1	4	..	..	..	..
2	..	1	..	..	..	2	3	1	1	1	..	63	57	53	50	48	43
1	1	1	..	..	..	1	1	1	1	1	..	..	..	..	..	..	..
10	4	6	1	1	77	92	111	108	123	127	132	1	1	..	..	..	..
7	4	4 6	3 6	1 5	.. ..	1	1	1 1	.. ..	.. ..	.. ..	8,430	8,506	8,351 8,571	8,533 8,755	8,630 9,053	8,702 ..
3	1	2	2	..	1	50	49	50	56	52	55	..	..	..	..	..	..
..	..	..	..	..	..	5	12	6	6	7	6	..	1	..	..	..	..
101 1,299	57 1,109	1,048	746	737	658	84 15	96 17	20	21	21	21	1 2	.. 1	2	2	3	2
..	..	..	..	..	..	7	6	7	7	8	8	..	..	..	..	..	..
175	125	138	125	103	50	..	..	..	..	..	..	..	..	..	..	..	..
10	3	3	3	2	1	14	15	16	18	18	18	..	..	..	..	..	..
141	126	122	99	76	109	101	104	114	136	140	140	12	12	11	10	5	..
4	1	..	..	..	..	3	3	3	..	..	..	1	9	..	5	..	..
2	3	74	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
2	..	1	..	..	..	198	203	214	247	208	214	..	..	..	..	..	..
.	..	..	..	..	..	5	6	7	5	3	2	149	113	73	81	66	..
..	..	..	..	..	..	1	1	..	..	..	..	3	3	4	2	4	2
2	2	3	1	..	..	195	200	203	446	391	406	..	..	..	..	..	..
2 2	1 2	1	2	2	2	76 128	74 122	94	131	87	54	.. ..	.. ..	..	..	..	..
1	1	1	1	..	..	8	7	5	5	3	1	..	..	..	..	..	..
..	..	..	..	..	..	2	1	1	..	..	..	1	..	..	..	..	..
4	2	3	4	4	4	15	15	16	18	24	8	..	..	..	..	..	..
139	119	100	89	45	..	2	2	1	1	2	..	106	113	116	121	116	..
..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	1	..	..
..	..	1	..	..	..	45	35	30	25	27	26	2	2	1	..	..	..
1,168	892	823	..	..	..	..	..	..	..	..	..	..	21	..	..	..	..
248 2,228	1,841	1,875	1,325	1,127	1,541	9 17	16	17	16	14	18	30 2	6	8	6	1	..
37	9	9	2	1	..	268	284	316	349	338	375	..	..	..	..	..	.
..	..	..	1	..	..	..	1	..	..	..	.	3,225	3,278	3,289	3,481	..	..
1	..	..	..	..	..	2	2	4	2	3	.	..	..	..	..	1	..
..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..
..	..	..	..	..	..	509	535	564	..	..	..	..	..	.	..	.	..

while 1931 figures for All Hindus are shown in column 2.
India States Agency.
figures for the Bombay States.
in many cases (*e.g.* Coorg, Madras, Hyderabad) included in those for Hindus in 1881.
Frontier Province relate to trans-frontier posts only.

SUBSIDIARY

Proportional strength of the main religions in each Pro

Province State or Agency.	Muslim.					
	1931	1921	1911	1901	1891	1881
INDIA	2,216	2,174	2,126	2,122	1,996	1,974
Provinces	2,469	2,407	2,351	2,324	2,240	2,260
Ajmer-Merwara	1,734	2,055	1,616	1,510	1,369	1,255
Andaman and Nicobar Islands	2,280	1,515	1,731	1,707	..	..
Assam	3,196	2,896	2,810	2,689	2,710	2,698
Baluchistan	8,744	8,731	9,106	9,150	..	..
Bengal	5,487	5,399	5,274	5,158	5,108	5,009
Bihar and Orissa	1,132	1,085	1,063	1,061	1,076	1,089
Bombay	2,039	1,974	2,046	2,026	1,871	1,836
Burma	399	*380*	*547* 347	*509* 323	*452* 333	*452* ..
Central Provinces and Berar	440	405	406	421	385	386
Coorg	844	795	751	756	732	703
Delhi	3,253	2,904	5,485	5,325	5,136	5,173
Punjab	5,655	5,533				
Madras	707	671	662	643	631	623
North-West Frontier Province	9,184	9,162	9,286	9,221	9,230	9,212
United Provinces	1,484	1,428	1,411	1,411	1,353	1,343
States and Agencies	1,347	1,343	1,331	1,376	1,176	946
Assam States	393	455	419	365	..	221
Baluchistan States	9,696	9,663	9,643	9,658	..	..
Baroda State	748	763	791	845	781	801
Bengal States	3,210	3,070	3,009	2,885	2,902	2,886
Bihar and Orissa States	42	40	42	39	40	48
Bombay States‡	929	913	977	1,217	1,060	1,085
Central India	568	553	546	606	546	551
Gwalior State	580	555				
Central Provinces States	94	89	95	96	87	85
Cochin State	729	702	695	671	642	555
Hyderabad State	1,063	1,041	1,032	1,037	987	946
Jammu and Kashmir State	7,728	7,675	7,594	7,416	7,051	..
Madras States	692	667	654	634	609	573
Mysore State	608	570	542	523	512	479
North-West Frontier Province (Agencies and Tribal Areas)	4,970	3,917	7,095	..	..	..
Punjab States	933	3,100	3,133	3,068	3,006	2,945
Punjab States Agency	3,480					
Rajputana	953	915	936	952	811	853
Sikkim State	10	3	5	4	..	..
United Provinces States	2,090	2,149	2,961	3,026	3,061	3,236
Travancore State	693	675	661	646	621	612
Western India States§	1,364	1,377	1,412	..	..	..

* The 1921-1881 figures for "Others" are inclusive of those for Aryas and Brahmos
† This is due to the inclusion of 120,091 persons who were shown under head
‡ Figures for 1901-1881 for all the religions are inclusive of those for Western
§ Figures for 1901-1881 are included in the

NOTE.—The *Italic* figures against Burma relate to Lower Burma only. The figures for Tribal Religions are in many cases
The proportions in the case of Agencies and Tribal Areas of the North-

TABLE I.

vince, State or Agency at each of the last six censuses.

Number per 10,000 of the population.

Christian.						Tribal.						Others.*					
1931	1921	1911	1901	1891	1881	1931	1921	1911	1901	1891	1881	1931	1921	1911	1901	1891	1881
179	150	124	99	79	73	236	309	328	292	328	259	20	20	13	11	7	6
142	123	102	82	68	58	213	280	301	250	264	221	25	22	14	14	7	6
124	112	108	78	50	48	27	96	79	..	..	..	6	35	24	11	26	3
496	586	214	197	...	..	3,379	3,387	3,670	3,326	..	..	51	135	31	82	..	..
235	168	99	61	31	15	825	1,479	1,652	1,652	1,771	1,000	1	1	1	1	..	..
174	159	121	116	..	..	1	..	..	..	..	..	4	55	23	6	..	..
36	31	29	25	21	20	105	181	161	105	93	70	1	2	1	1	2	3
91	76	67	51	34	18	544	553	644	554	598	454	..	2	1	..	1	9
145	137	119	112	86	84	59	64	87	38	113	342	49	52	49	49	46	49
226	195	*281* 173	*237* 141	*240* 159	*225* ..	444	534	*300* 579	*281* 381	*320* 221	*354* ..	103	*12*	*2* 1	*1* 122†	*1* 1	*1* ..
33	30	25	23	11	11	872	1,160	1,254	1,176	1,307	1,281	1	2	2	2	1	..
210	194	203	204	196	177	..	1,265	1,099	183	..	..	2	..	2	2	2	1
267 176	273 159	99	33	26	16	.. ..	.. ..	..	..	..	..	9 169	253 97	49	..	..	..
380	322	288	268	243	227	75	137	154	168	133	..	..	..	..	..	4	1
51	47	30	25	29	30	..	..	..	..	..	..	..	..	..	..	..	..
42	44	38	22	13	11	..	..	..	..	..	..	..	46	28	14	5	..
307	250	200	162	120	128	316	415	425	445	520	394	5	8	9	3	6	6
746	105	4	2	..	..	4,491	3,433	3,758	3,632	..	3,858	..	..	..	..	..	..
..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
30	35	35	39	3	3	184	767	568	903	124	465	29	39	42	44	34	37
29	22	3	4	6	2	14	36	7	39	14	848	..	1	1	1	54	..
161	117	97	9	6	3	775	1,154	1,267	1,326	1,314	1,702	1	1	1	..	9	..
36	34	29	16	10	10	58	169	381	36	121	532	5	6	6	6	4	5
16 3	15 5	10	10	6	8	514 ..	666 507	517	1,168	1,890	962	1 1	3 2	2	2	1	1
208	176	183	4	2	..	2,487	2,419	3,521	3,092	2,522	1,293	..	..	..	..	..	..
2,779	2,682	2,539	2,441	2,404	2,272	..	4	46	48	..	..	12	12	13	14	16	21
105	50	41	21	18	14	377	345	214	59	25	..	1	2	1	1	1	1
6	5	3	1	1	..	..	..	..	..	..	..	..	70	3	1	65	..
2,900	2,664	2,399	2,174	1,931	1,956	4	24	41	77	..	..	3	3	3	3	4	4
134	119	103	90	77	70	36	105	124	156	136	117	1	1	..	..	..	..
923	607	98	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
5 10	9	4	2	1	1	.. ..	..	..	..	..	..	6 43	27	10	1	2	..
5	5	4	3	2	1	204	488	422	366	496	..	..	3	2	1	1	21
25	45	32	23	..	..	2,453	..	..	..	..	..	..	..	..	..	..	..
24	22	21	6	1	..	..	..	..	..	..	..	..	8	6	4	..	..
3,149	2,928	2,636	2,362	2,060	2,076	6	31	46	95	..	..	..	1	..	1	1	..
4	3	4	..	..	..	2	5	4	..	..	..	2	3	102	..	..	..

while 1931 figures for All Hindus are shown in column 2.
"Minor Religions and Religions not returned".
India States Agency.
figures for the Bombay States.
(*e.g.* Coorg, Madras, Hyderabad) included in those for Hindus in 1881.
West Frontier Province relate to trans-frontier posts only.

SUBSIDIARY

Distribution of Urban

Province, State or Agency.	Total Population	Hindu.		Sikh.		Jain.		Buddhist.		
		Urban.	Rural.	Urban.	Rural.	Urban.	Rural.	Urban.	Rural.	Urban.
1	2	3	4	5	6	7	8	9	10	11
INDIA	350,529,557	25,124,727	214,070,413	344,678	3,991,093	433,773	818,332	912,911	11,873,895	98,085
Provinces	271,431,549	18,837,622	158,840,366	282,974	2,938,023	169,491	284,078	909,800	11,783,289	87,758
Ajmer-Merwara	560,292	112,911	321,598	335	6	6,490	13,007	4	..	300
Andaman and Nicobar Islands ..	29,463	..	7,618	..	649	..	..	..	2,912	..
Assam	8,622,251	153,673	4,778,087	432	2,065	880	1,756	278	14,677	6
Baluchistan (*Districts and Administered Territories*).	463,508	33,387	8,045	7,002	1,366	32	..	68	..	167
Bengal	50,114,002	2,541,062	19,029,345	6,627	693	5,643	3,524	15,609	300,422	1,350
Bihar and Orissa	37,677,576	1,235,093	29,776,381	3,982	1,671	1,852	1,882	140	779	226
Bombay (*including Aden*)	21,854,866	3,368,464	13,252,757	9,191	11,702	64,528	135,487	1,862	342	81,189
Burma	14,647,497	309,043	261,910	6,195	4,712	599	122	890,684	11,457,353	403
Central Provinces and Berar ..	15,507,723	1,314,016	12,024,207	2,265	1,976	24,968	52,927	44	22	1,953
Coorg	163,327	6,440	139,567	..	..	50	33	..	3	27
Delhi	636,246	244,745	155,118	6,324	113	4,581	764	76	..	126
Madras	46,740,107	5,119,713	36,157,657	515	22	7,134	24,072	813	546	485
North-West Frontier Province (*Districts and Administered Territories*).	2,425,076	93,127	49,850	25,377	17,133	..	..	2	..	60
Punjab	23,580,852	1,126,247	5,202,341	205,681	2,858,463	21,620	13,664	39	5,684	511
United Provinces of Agra and Oudh	48,408,763	3,229,701	37,675,885	9,048	37,452	31,114	36,840	181	549	955
States and Agencies	79,098,008	6,237,105	55,230,047	61,704	1,053,070	264,282	534,254	3,111	90,606	10,327
Assam States	625,606	86,885	186,005	193	39	141	26	31	59	2
Baluchistan States	405,109	1,097	11,152	27	30	..	..	..	..	..
Baroda State	2,443,007	411,443	1,740,628	500	21	20,393	28,015	2	41	5,789
Bengal States	973,336	22,702	618,960	14	..	357	145	2	14,530	..
Bihar and Orissa States	4,652,007	44,106	4,150,772	41	175	1	317	..	1,376	..
Bombay States	4,468,396	483,358	3,437,730	40	674	19,908	67,445	4	..	387
Central India Agency	6,632,790	469,334	5,382,870	991	435	18,234	32,034	13	..	921
Central Provinces States	2,483,214	65,025	1,723,376	50	229	971	989	3	..	15
Gwalior State	3,523,070	285,905	2,985,671	269	412	16,986	28,093	..	..	223
Hyderabad State	14,436,148	1,048,901	11,127,826	3,441	1,737	6,141	15,402	38	14	1,520
Jammu and Kashmir State ..	3,646,243	99,148	637,074	4,664	45,998	594	3	1,707	37,017	4
Madras States Agency	6,754,484	536,773	3,786,377	5	7	281	1	37	123	15
Cochin State	*1,205,016*	*113,051*	*667,433*	..	..	*209*	*1*	*34*	*62*	*3*
Travancore State	*5,095,973*	*354,581*	*2,780,307*	*5*	*7*	*41*	..	*3*	*61*	*12*
Other Madras States	*453,495*	*69,141*	*333,637*	..	..	*31*	..	..	..	..
Mysore State	6,557,302	800,606	5,215,274	49	51	7,461	22,152	1,237	2	323
North West Frontier Province (*Agencies and Tribal Areas*).	46,451	..	13,651	..	5,425	..	..	..	1	..
Punjab States	437,787	7,718	376,165	475	10,379	207	201	..	1,308	..
Punjab States Agency	4,472,218	191,680	1,695,569	49,434	947,192	3,636	3,812	2	720	17
Rajputana Agency	11,225,712	1,074,055	8,504,750	1,431	40,174	92,565	208,183	1	..	289
Sikkim State	109,808	..	47,074	..	..	..	2	..	35,412	..
United Provinces States	1,206,070	44,732	905,992	40	70	124	90	..	1	..
Western India States Agency ..	3,999,250	563,637	2,683,131	40	22	76,282	127,344	34	2	922

TABLE II.

and Rural Population.

Zoroastrian.	Muslim.		Christian.		Jew.		Tribal.		Others.	
Rural.	Urban.	Rural.	Urban.	Rural.	Urban.	Rural.	Urban.	Rural.	Urban.	Rural.
12	13	14	15	16	17	18	19	20	21	22
11,667	10,567,672	67,109,873	1,276,462	5,020,301	21,225	2,916	91,771	8,188,576	38,388	532,799
8,791	8,175,856	58,844,587	952,915	2,913,745	19,564	1,642	59,913	5,719,796	36,841	514,498
1	53,905	43,228	6,202	745	49	..	1	1,508	2	..
1	..	6,719	..	1,461	..	..	..	9,955	..	148
1	53,067	2,702,847	3,385	199,201	..	18	1,678	709,754	22	424
..	43,416	361,893	7,904	140	15	..	28	38	6	1
170	1,029,374	26,468,250	76,440	103,859	1,851	16	4,847	523,190	1,527	203
15	374,490	3,890,300	29,698	312,196	5	19	8,343	2,040,466	8	30
8,355	1,141,638	3,315,259	189,327	127,715	16,180	1,559	5,100	124,035	149	27
16	191,283	393,556	71,688	259,418	1,206	12	32,349	618,039	16,587	132,322
139	308,641	374,213	29,346	21,238	147	6	7,090	1,344,525	..	..
..	2,459	11,318	851	2,574	..	..	..	..	..	5
..	180,018	26,942	11,122	5,867	11	..	..	..	439	..
22	837,740	2,468,197	370,317	1,403,959	23	..	477	348,286	39	90
..	256,189	1,971,114	11,411	802	11	..	..	..	..	..
35	1,629,660	11,702,800	65,636	349,152	10	2	..	..	18,060	381,247
36	2,073,976	5,107,951	79,588	125,418	56	10	..	..	2	1
2,876	2,391,816	8,265,286	323,547	2,106,556	1,661	1,274	31,858	2,468,780	1,547	18,301
..	2,577	22,023	4,921	41,739	..	..	7,739	273,219	7	..
..	9,437	383,347	14	1	2	..	..	2	..	..
1,338	81,173	101,467	2,699	4,563	47	8	957	43,933	..	..
..	4,471	308,005	59	2,709	..	..	5	1,377	..	..
23	1,268	18,248	254	74,578	..	..	45	360,555	..	248
1,081	99,025	315,906	4,602	11,404	77	852	62	25,841	..	..
55	178,828	197,809	6,823	3,653	38	..	2,488	338,264	..	..
2	5,977	17,277	1,399	50,302	..	..	1,625	615,974	..	..
16	91,179	113,118	747	451	..	..	..	..	..	..
264	514,281	1,020,385	26,261	125,121	27	..	16,371	528,418	..	..
1	234,915	2,582,721	1,277	986	..	..	5	129	..	..
1	94,521	372,875	204,517	1,754,294	1,355	394	5	2,902	..	1
..	*18,440*	*69,462*	*76,538*	*261,332*	*1,065*	*386*	..	..	..	..
1	*67,497*	*285,777*	*129,354*	*1,475,121*	*290*	*8*	*5*	*2,902*	..	*1*
..	*8,584*	*17,636*	*1,625*	*17,841*	..	..	..	..	..	..
8	170,349	228,279	64,219	23,319	39	..	653	23,175	106	..
2	..	23,086	..	4,286	..	..	..	..	..	..
1	6,125	34,720	9	197	..	..	..	..	..	282
5	192,150	1,364,441	1,100	3,259	1	..	..	..	1,431	17,769
30	383,045	686,280	3,307	2,471	38	..	1,574	227,518	..	1
..	..	104	..	276	..	..	..	26,940	..	..
..	81,107	171,024	135	2,755	..	..	..	..	..	..
49	241,388	304,181	1,204	192	37	20	329	533	3	..

SUBSIDIARY TABLE III.

Distribution of Christians—Number and Variation.

Province, State or Agency.	Actual number of Christians in 1931	1921	1911	1901	1891	1881	Variation per cent. (Increase + Decrease —). 1921-31	1911-21	1901-11	1891-1901	1881-91	1881-1931
INDIA	6,296,763	4,754,064	3,876,203	2,923,241	2,284,380	1,862,634	+ 32·5	+ 22·6	+ 32·6	+ 28·0	+ 22·6	+238·1
Provinces	4,089,849	3,158,364	2,601,761	1,935,358	1,516,356	1,175,738	+ 29·5	+ 21·4	+ 34·4	+ 27·6	+ 29·0	+247·9
Ajmer-Merwara ..	6,947	5,531	5,432	3,712	2,683	2,225	+ 25·6	+ 1·8	+ 46·3	+ 38·4	+ 20·6	+212·2
Andaman and Nicobar Islands.	1,461	1,586	566	486	483	..	— 7·9	+180·2	+ 16·5	+ 0·6	..	..
Assam	249,246	132,106	66,562	35,969	16,844	7,093	+ 88·7	+ 98·5	+ 85·1	+113·5	+137·2	+3,414·0
Baluchistan	8,059	6,693	5,085	4,026	3,008	..	+ 20·4	+ 31·6	+ 26·3	+ 33·8	..	..
Bengal	183,067	149,069	129,746	106,596	82,339	72,289	+ 22·8	+ 14·8	+ 21·7	+ 29·5	+ 13·9	+153·2
Bihar and Orissa ..	416,726	303,358	268,265	172,340	110,360	55,943	+ 37·4	+ 13·1	+ 55·7	+ 56·2	+ 97·3	+644·9
Bombay	333,048	277,989	244,392	220,087*	170,009*	145,154*	+ 19·8	+ 13·7	+ 11·0	+ 29·5	+ 17·1	+129·4
Burma	331,106	257,106	210,081	147,525	120,922	84,219†	+ 28·8	+ 22·3	+ 42·4	+ 22·2	..	+293·1
Central Provinces and Berar.	102,285	77,718	73,401	27,252	14,451	13,174	+ 31·6	+ 5·9	+169·3	+ 88·6	+ 9·3	+676·4
Coorg	3,425	3,182	3,553	3,683	3,392	3,152	+ 7·6	— 10·4	— 3·5	+ 8·6	+ 7·6	+ 8·7
Delhi	16,989	13,320	199,751	66,591	48,472	28,054	+ 27·5	+73·3	+200·0	+ 37·4	+ 72·8	+1,455·4
Punjab	419,353	332,939					+ 26·0					
Madras	1,793,742	1,380,672	1,208,515	1,038,863	879,438	711,117	+ 29·9	+ 14·2	+ 16·3	+ 18·1	+ 23·7	+152·2
North-West Frontier Province.	16,499	13,916	6,718	5,273	5,437	5,645	+ 18·6	+107·1	+ 27·4	— 3·0	— 3·7	+192·3
United Provinces ..	207,896	203,179	179,694	102,955	58,518	47,673	+ 2·3	+ 13·1	+ 74·5	+ 75·9	+ 22·7	+336·1
States and Agencies ..	2,206,914	1,595,700	1,274,442	987,883	768,024	686,896	+ 38·3	+ 25·2	+29·0	+ 28·6	+ 11·8	+ 221·3
Baroda	7,262	7,421	7,203	7,691	646	771	— 2·1	+ 3·0	— 6·3	+ 1,090·6	— 16·2	+841·9
Central India	10,476	9,062	9,358	8,113	5,992	7,065	+15·6	+14·4	+ 15·3	+ 35·4	— 15·2	+65·2
Gwalior	1,198	1,649					—27·3					
Cochin	334,870	262,595	233,092	198,239	173,831	136,361	+27·5	+ 12·7	+ 17·6	+ 14·0	+ 27·5	+145·6
Hyderabad	151,382	62,656	54,296	22,996	20,429	13,614	+141·6	+ 15·4	+136·1	+ 12·6	+ 50·1	+1,012·0
Jammu and Kashmir ..	2,263	1,634	975	422	218	..	+ 38·5	+ 67·6	+131·0	+ 93·6	..	..
Mysore	87,538	71,395	59,844	50,059	38,135	29,249	+ 22·6	+ 19·3	+ 19·5	+ 31·3	+ 30·4	+199·3
Rajputana	5,778	4,911	4,256	2,841	1,862	1,294	+ 17·7	+ 15·4	+ 49·8	+ 52·6	+ 43·9	+346·5
Sikkim	276	370	285	135	..	..	— 25·4	+ 29·8	+111·1	..	..	..
Travancore	1,604,475	1,172,934	903,868	697,387	526,911	498,542	+ 36·8	+ 29·8	+ 29·6	+ 32·4	+ 5·7	+221·8
Western India States ..	1,396	1,073	1 265	‡	‡	‡	+ 30·1	— 15·2	..	..	..	..

* Includes figures for Western India States. † Refers to Lower Burma only. ‡ Included in Bombay.

CHAPTER XII.

Caste, Tribe and Race.

Enumeration of Caste and Race.

177. Column eight in the general schedule provided for an entry of 'caste tribe or race'. The term 'caste' needs no definition in India; 'tribe' was provided to cover the many communities still organised on that basis in whose case the tribe has not become a caste; it was likewise determinate enough, and no attempt was made to define the term 'race', which is generally used so loosely as almost to defy definition. Nor is it intended to do anything so rash as to attempt to define it here, while in the census schedule its very looseness enabled it to cover returns which, though not strictly referable all to the same category, were quite adequate for the purpose intended, which was primarily to obtain a return of Indians to whom the terms 'caste' and 'tribe' are inapplicable and a means of identifying Anglo-Indians whose birthplace might be an inadequate means of identification. If an interpretation of the term 'race' as used in this chapter is demanded by the reader he must rest content with Sir Flinders Petrie's definition of it as "a group of human beings, whose type has become unified by their rate of assimilation's exceeding the rate of change produced by foreign elements". It would have been inexpedient to prescribe this definition as a guide for enumerators. Generally speaking foreigners were asked to give their nationality though this is not necessarily identical with their race, and the term 'British', if used with reference to nationality, might be correctly held to cover a Cypriot or a Maltese, or even a South American Indian with a birth place in the U. S. A., a quasi-Spanish name, and an infelicitous domicile in what was once the Kingdom of Ireland.

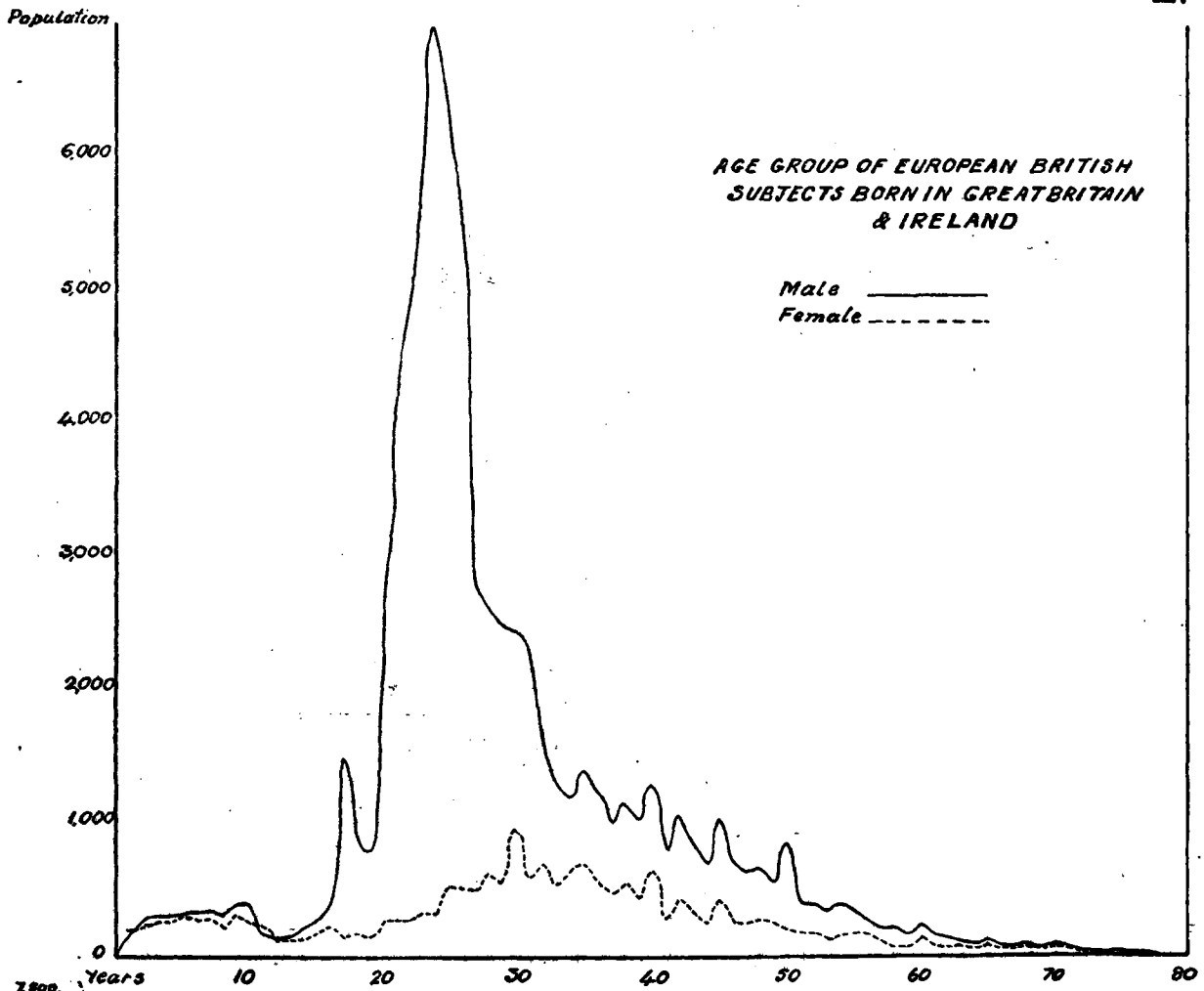
European British Subjects.

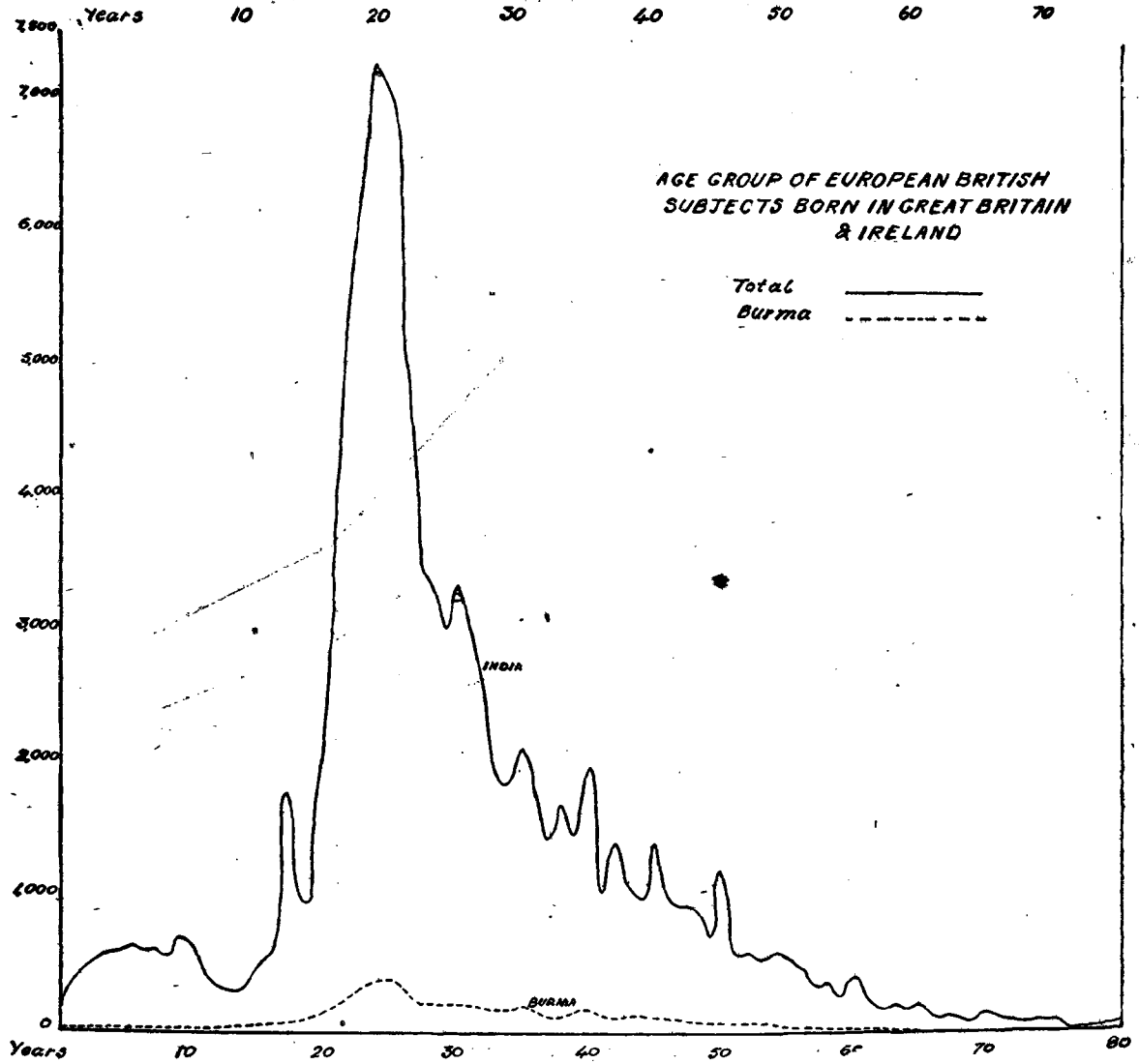
178. In the Provincial Census Reports foreigners generally will be found returned in Table VI by the continent of their origin divided under the three heads of British Dominions (including, for convenience, mandated territories) Non-British countries, and Unspecified, while in the India tables they are shown in greater detail. The total number of foreigners censused in India in 1931, including European British subjects and Armenians, only amounted to 168,134 (117,336 males and 50,798 females) or ·05 per cent. of the total population. The European British subjects totalled 155,555 of whom 110,137 were males and 45,418 females. Of these again 7,205 males and 3,422 females were found in Burma, and while in Burma the figures show a total increase of 1,434 males and 1,365 females since 1921, the figures for India proper show a further fall since 1921 and are now little more than 80 per cent. of those recorded in 1911, while males taken alone are fewer than in 1901.

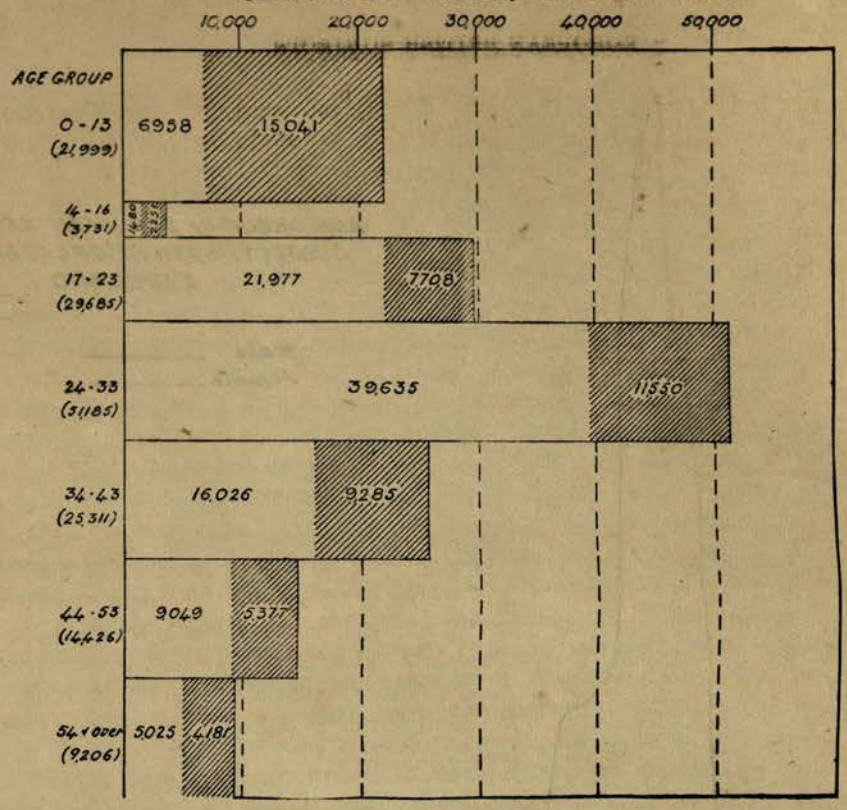
European British Subjects according to Census Returns.

	1931.		1921.		1911.		1901.	
	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.
India	110,137	45,418	119,149	46,336	134,950	50,484	112,687	42,004
Ajmer-Merwara ..	1,172	352	1,080	320	1,369	333	644	273
Andamans and Nicobars	180	34	171	38	193	50	222	47
Assam	2,168	959	1,806	863	1,556	616	1,484	484
Baluchistan	3,795	1,219	3,967	787	3,360	809	2,961	491
Bengal	13,116	7,788	12,449	7,567	14,659	7,668	15,767	8,271
Bihar and Orissa ..	3,443	2,232	3,563	2,182	3,489	2,157	..	..
Bombay (*including Aden*)	16,679	7,452	23,161	7,880	21,157	7,826	19,872	7,182
Burma	7,205	3,422	5,771	2,057	8,904	2,924	6,481	2,125
Central Provinces and Berar.	3,815	1,309	4,338	1,289	5,323	1,710	3,408	1,587
Coorg	69	53	38	56	109	65	126	86
Delhi	2,879	1,330	3,401	916	622	246	Incld. in Punjab.	
Madras	6,423	4,253	5,253	4,697	8,143	4,965	7,852	4,705
N.-W. F. P.	10,116	1,427	9,397	1,056	4,898	800	4,053	587
Punjab	14,597	4,926	15,860	5,686	23,457	7,407	19,791	5,781
United Provinces ..	16,868	5,193	17,805	6,638	24,461	8,350	20,363	7,237
Baroda State ..	78	33	49	31	72	51	44	36
Central India Agency	1,788	572	2,705	614	3,414	554	3,133	580
Cochin State ..	38	34	19	4	Incld. in Madras		31	14
Gwalior State ..	54	47	489	60	Included in C. I. figures		32	29
Hyderabad State ..	1,760	93	2,960	543	4,251	979	2,760	387
Jammu and Kashmir State.	69	82	123	140	124	102	101	88
Mysore State ..	2,929	1,978	4,132	2,504	4,697	2,426	2,748	1,429
Rajputana Agency ..	463	393	462	342	682	445	504	381
Sikkim State ..	4	3	1	6	10	1	..	..
Travancore State ..	299	157	149	60	Incld. in Madras		310	194
W. I. S. Agency ..	130	79	Included against Bombay.					

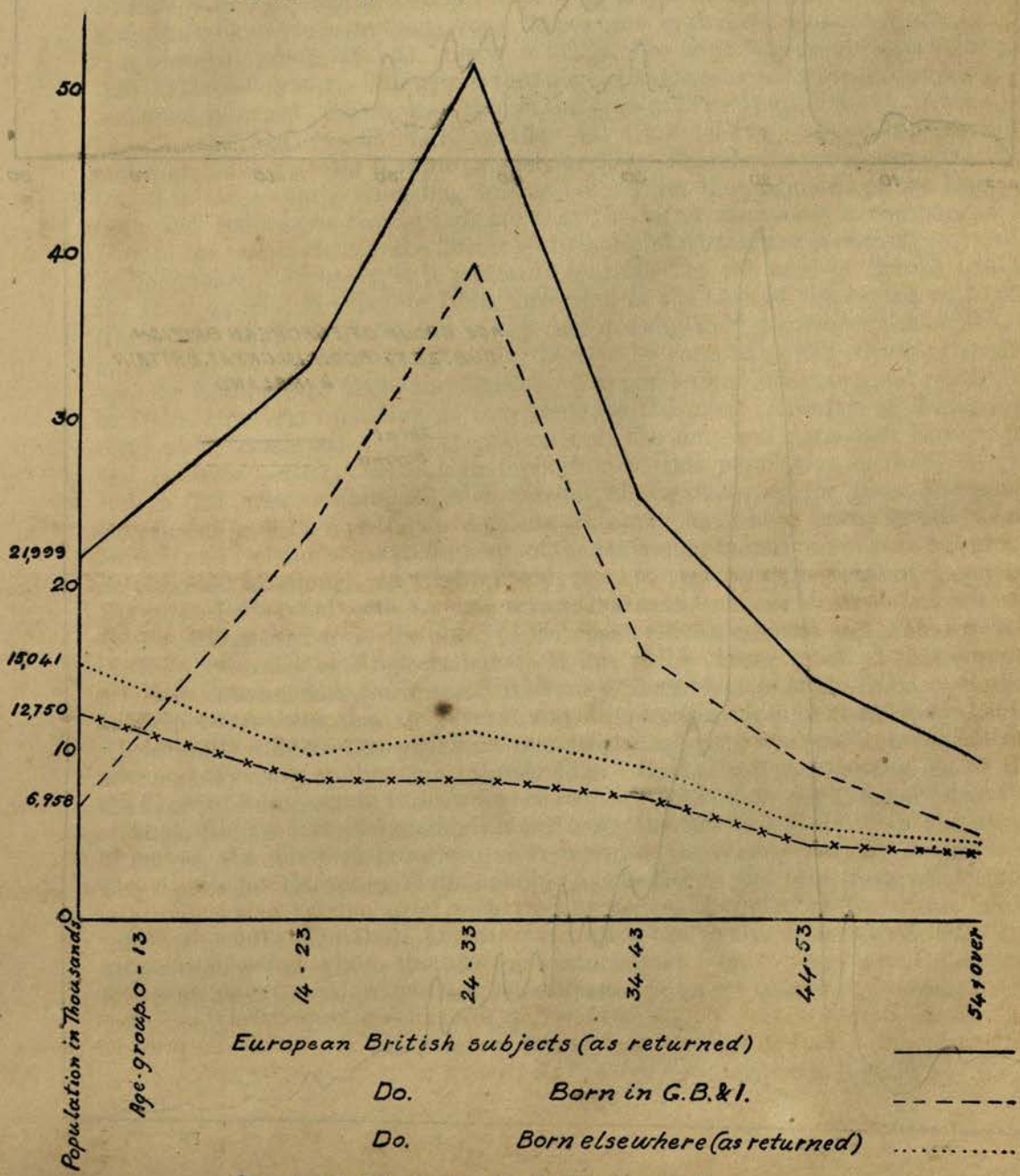
The figures above show comparisons since 1901. These figures must be taken with some qualification as they certainly represent more than the actual numbers on account of the tendency of Anglo-Indians who are not handicapped by excessive pigmentation to return themselves as Europeans. The total returned as European British subjects in India including Burma was 155,555, but the total number of those who were returned as born in Great Britain and Ireland was 100,150. To these may be added British subjects born in Gibraltar and Malta giving a total of 100,586. The difference between this total and that of the persons who returned themselves as European British subjects, *i.e.*, 54,969, gives some indication of the number of Anglo-Indians who returned themselves as Europeans. In this connection it is necessary to examine the proportion of India-born to Europe-born in the successive age groups. In the lowest age group only 31·6 per cent. of those returned as E. B. subjects were born in Great Britain or Ireland. In group 14 to 16 this percentage rises to 39·7 per cent.; in group 17—23 to 74 per cent., or in the two taken together, *i.e.*, 14—23, to 70·2 per cent.; in group 24—33, where the percentage of Europe-born is highest, to 77·4 per cent. After that it falls to about 63 per cent. between the ages 34—53, and to 54·4 in the group 54 and over. As no separate figures are available for European British subjects born outside Great Britain and Ireland it is necessary to make some arbitrary adjustment of figures to arrive at an estimate of the number of Anglo-Indians returned as European British subjects more accurate than the mere indication given by the difference in the figures. If something over 5 per cent. be allowed for the Indian, colonial and foreign-born of pure non-domiciled European parentage in the lower age-groups and about half that in the highest, and if an additional 5 per cent. be allowed in the lowest group for children of European British subjects who are taken to Europe at an early age and do not return, we arrive at the figure of 58 per cent. as born in India in the lowest age-group, 25 per cent. in the next group 14—23, and 18 per cent. in group 24—33, rising to 32 in the next two groups and to 43 per cent. in the last group. The figures thus arrived at for persons born and domiciled in India but returned as European British subjects are 12,841 aged 0—13, 8,286 aged 14—23, 8,987 aged 24—33, 8,019 aged 34—43, 4,656 aged 44—53 and 3,969 aged 54 and over, making a total of approximately 47,000. The relative proportions are illustrated in the accompanying diagrams, and the figures thus adjusted of the Europe-born and India-born clearly indicate that the latter represents a comparatively normal age series, whereas the former is obviously abnormal and is entirely governed by migration. Probably it is primarily controlled by the ages of British troops, the total number of which in India amounted at the time of the census to 70,034 (there were 72,151 in 1921), but in any case it completely dominates the combined curve after the age of 4 years, as may be seen by comparing the curves of annual ages for Europe-born males and females. The numbers of those born and remaining in India however, excluding as they must do the great majority of Europeans, seem to be much too high to represent only the unmixed domiciled Europeans, and it seems certain that a high proportion of this population is really Anglo-Indian. If, after making an allowance as above indicated for those European, British subjects of non-Indian domicile who may have been born outside Great Britain and Ireland, some 35 per cent. of the remaining India-born in each age group be regarded as enough, as they probably are, to represent the total of domiciled European British Subjects, we may take 30,000 as the number of Anglo-Indians who should be deducted from the total of European British subjects and added to that of those returned as Anglo-Indians. It has to be borne in mind that cases of marriage between male European British subjects and female Anglo-Indians are probably more frequent than the reverse, and in such cases it is more than likely that the whole family will be returned as European British subjects whereas in fact that description may really apply to one member only. Be that as it may, by this calculation the figure of Europeans in India would be reduced to 125,555—say 125,500, while that of Anglo-Indians is correspondingly raised from 138,395 to 168,400. In the tables, of course, the numbers are given as returned at the census (part *ii*, Table XIX). The figures for European British subjects, whether in the form returned or thus adjusted, are to be compared with 185,434 persons returned as European British subjects in 1911, the Delhi Durbar year, when the figures were higher than ever before or since, of whom 122,919 were returned as born in the United Kingdom. It is possible of course that to make the adjusted figure for 1931 comparable a similar


Population
6,000
5,000
4,000
3,000
2,000
1,000
0
Years
10
20
30
40
50
60
70
80
AGE GROUP OF EUROPEAN BRITISH SUBJECTS BORN IN GREAT BRITAIN & IRELAND
Male
Female


7,000
6,000
5,000
4,000
3,000
2,000
1,000
0
Years
10
20
30
40
50
60
70
80
AGE GROUP OF EUROPEAN BRITISH SUBJECTS BORN IN GREAT BRITAIN & IRELAND
Total
Burma
INDIA
BURMA



Age Groups of persons returned as European British Subjects.
The unshaded portions represent those born in Europe.



adjustment is needed for this 185,434 also. If worked out on the same proportion it would reduce the number of European British subjects in 1911 to less than the number who returned a birth-place in the United Kingdom by some 3,000, which is impossible, and would add 19,000 odd to the Anglo-Indian total of that census (155,560 : 100,590 :: 185,400 : 119,900), and reduce the total of genuine European British subjects to 166,100. In any case the decrease of the latter in 1931 is marked and unequivocal.

Whereas in the Indian Empire the number of European British subjects is decreasing, in Burma taken by herself, on the contrary, the number of European British subjects censused in 1931 has definitely increased since 1921, though the figure at that census—7,828, showed a marked decrease on the number recorded in 1911, which was 11,828. Nor has this total been regained in 1931, for the Burma figure at this census is 10,627 for European British subjects and 19,200 for Anglo-Indians. In Burma again if a similar adjustment be made for the return of Anglo-Indians as Europeans, the adjusted figures become 7,900 for European British subjects in Burma in 1931 and 21,900 for Anglo-Indians. Some of the European British subjects were probably tourists, as the tourist season was not entirely over by the end of February. Precise figures are not available, but as far as can be ascertained the number is not likely to be more than about 1,000 for India and Burma together. The actual total number of all foreign tourists that passed through Burma between October and March was only 5,287.

One noticeable feature of the 1931 figures for European British subjects is to be found in the increase of females relative to males. While the numbers (unadjusted) of males have decreased by 9,000 since 1921, those of females have decreased by 900 only. In Burma they have not only increased relatively to males but absolutely by 1,365 over the 1921 figure. This increase of females is partly perhaps to be accounted for by an increasing number of Europeans in India, particularly since the war, who marry comparatively young, partly perhaps by more wives and daughters brought out to India since war conditions ceased, and in some small degree perhaps by the number of Indians who go abroad for their education and return with European wives.

Other Foreigners.

179. The total number of Europeans other than British subjects censused in the Indian Empire was 14,353 in 1911 (Armenians included) 10,546 in 1921 just after the war, and 12,579 in 1931. Of these nearly half did not specify the country of their birth, merely returning it as Europe, and of those who did specify the birth-place some 1,500 came from France, 1,000 from Germany, 900 from Italy, 500 each from Belgium and Turkey, and 300 from Switzerland, no other Continental nation contributing as many as 300 persons. Details will be found in part ii of this Volume, Table VI.

Anglo-Indians.

180. Turning to Anglo-Indians we find that in contrast to Europeans the number returned at the census shows an increase of 22·4 per cent. over that in 1921 and of 122·9 per cent. on the total returned in 1881. In 1921 an Anglo-Indian was described for census purposes as a person of mixed European and Indian descent, but for the 1931 census a slightly different definition was suggested, for use where a definition was asked for, describing an Anglo-Indian for census purposes as a person whose father, grand-father or other progenitor in the male line was an European, since it was assumed that others would probably prefer to be returned as Indians. It is possible however that this consideration was inoperative in the case of the progeny of an European or Anglo-Indian woman by an Indian Christian, and the definition adopted may have been at least to that extent unsatisfactory. The actual number returned in 1931 was 138,395 (71,247 males and 67,148 females), of which 61,363 males and 57,832 females were found in India proper and 19,200 (9,884 males and 9,316 females) in Burma, but if to these totals we add the number by which it was calculated that the total of European British subjects had to be reduced, we get a total of 168,400 as the probable real number of Anglo-Indians in the Indian Empire, of whom 22,000 are in Burma. Here again however some allowance must be made in India proper for the return of Indian Christians as Anglo-Indians. It is probable that a number of the descendants of Portuguese dependants, whose practice it was to take their masters' names and who are found in certain districts in Bombay and Bengal where they are known respectively as "East Indians" and "Feringhis," returned themselves at this census, as in previous

decades, as Anglo-Indians. The figures show that outside Bombay and Calcutta the number of such returns is very small, but it is difficult to estimate their number in the Presidency towns. It may fairly be taken, perhaps, as 3,400, so that the total number of Anglo-Indians may be put at 165,000. Attention has already been drawn to their remarkable fecundity.

Tribe.

181. Indians returned by tribe instead of by caste form rather a heterogeneous category including Muslim tribes of Pathans, Baluchis, Brahuis or Mappillas; comparatively primitive tribes like the Toda or the Nicobarese who still worship their own tribal deities; others who have become partly Hinduised like most of the Bhils and Gonds where the tribal name is on the way to become a caste name; others largely Christianised like the Oraon or the Lushei, and others again wholly Hindu like the Manipuri, but retaining their distinctive language and culture. In the case of the primitive tribes who are partly Christianised, comparison with the figures of previous decades has been made very difficult by the irritating practice of some missionaries to induce their converts to abandon their tribal name and return themselves nondescriptly as "Indian Christians", as though they had some cause to be ashamed of their forefathers. As the question of the welfare of primitive tribes in contact with changing conditions and progressive culture is of some importance, at any rate to the tribesmen themselves, the comparative figures of such tribes have as far as possible been collected in Table XVIII for successive decades.

The Return of Caste.

182. As on the occasion of each successive census since 1901, a certain amount of criticism has been directed at the census for taking any note at all of the fact of caste. It has been alleged that the mere act of labelling persons as belonging to a caste tends to perpetuate the system, and on this excuse a campaign against any record of caste was attempted in 1931 by those who objected to any such returns being made. It is, however, difficult to see why the record of a fact that actually exists should tend to stabilize that existence. It is just as easy to argue and with at least as much truth, that it is impossible to get rid of any institution by ignoring its existence like the proverbial ostrich, and indeed facts themselves demonstrate that in spite of the recognition of caste in previous decades the institution is of itself undergoing considerable modification. Indeed the treatment of caste at the 1931 census may claim to make a definite, if minute, contribution to Indian unity. Thus in the tables for literacy and civil condition by selected castes the arrangement which has hitherto been on a purely provincial basis, has been changed to show collectively corresponding units from different parts of India, while the same principle has been attempted in the tabulation of castes. How far the agitation, which was strongest in the Punjab, for the return of no caste was really due to a *bona-fide* desire to see caste abolished, and how far it may have been due to entirely other considerations of a political nature, we cannot pretend to say. It does seem clear, however, that in some degree political considerations did contribute to an agitation which probably started with a quite disinterested impulse. It is possible also that the desire of certain sects of Hinduism to extend their numbers and influence may have contributed from a sectarian as distinct from the political standpoint. No total of Hindus who returned themselves as of no caste in India at the last census is available, but 20,993 Hindus appeared in the Punjab census tables as "caste unspecified", about half of them coming from Bahawalpur State. In 1931, a definite return of nil was accepted for caste as distinct from the individuals who on account of ignorance or accident failed to state any caste at all. These returns of 'caste nil' totalled 1,883,464 for India, 98 % of which came from Bengal. In addition to it there were 60,715 Hindus for whom no return of caste was obtained. No return of caste was insisted on from Arya or Brahmo Hindus or from Sikhs, Jains, Buddhists, Muslims or Christians unwilling to make one, but where volunteered it was recorded, and has in the case of some Muslim groups been tabulated where such groups present functional or social features obviously derived from the caste system. It is not suggested that caste rules are observed by Muslims as they are by Hindus but, though there is no ban on commensality, inter-group marriage is apt to be restricted in the case of Muslim groups derived from Hindu castes, and is perhaps hardly as free as it is among the corresponding groups of Sikhs. Indian Christians who did not return their caste, and the majority do not do so, generally appeared on the schedule in this column under the designa-

tion 'Indian Christian'. Caste, however, as pointed out elsewhere is by no means ignored after conversion. Only last June (1932) a writer in *The Guardian* (Madras) quoted the case of a Christian pastor in Madras, who, after presiding at a church committee meeting, went for a meal to the catechist's house. As he was an Adi-Dravida he could only be allowed to eat by himself in the veranda and "had to remove his leaf-plate himself". The same writer laid stress upon the part played by caste in church politics and the greater tolerance with which the institution is regarded by the Roman Church. It is of course the desire to escape from the stigma of an outcaste name that leads Indian Christians generally to return no caste, though curiously enough some Christians in the Central Provinces returned their caste as *Satnami*, in itself a religious sect probably schismatic from Hinduism but now little more than an euphemism for 'Chamar'.

It has already been suggested that facts themselves show that caste is undergoing a change. There are, however, influences at work which sometimes cut both ways. The introduction of railways, 'buses and quick communications has often been credited with a tendency to break down caste—and there can be no doubt that this is true with regard to some aspects of caste, *e.g.*, distance pollution. On the other hand rapid communications seem to have acted to a certain extent as a strengthening bond, since they render possible the practice of continuing to marry within the group in spite of a change of residence to a distant place. There is no doubt whatever that in the past the migration of small groups to the areas in which they have been out of touch with their religion or caste fellows, and perhaps in mediaeval times subject to different sets of caste rules promulgated by rulers with different policies or views, has led to the splitting of castes into a number of endogamous groups which might have retained their original uniformity but for distance and failure of contact. The railway and the omnibus operate against such fission.

There is, however, apparently a tendency towards the consolidation of groups at present separated by caste rules. The best instance of such a tendency to consolidate a number of castes into one group is to be found in the grazier castes which aim at combining under the term "Yadava" Ahirs, Goalas, Gopis, Idaiyans and perhaps some other castes of milkmen, a movement already effective in 1921. This movement is generally speaking, however, poorly co-ordinated as yet and within a given group of castes the tendency some times shows itself in contradictory directions, but we may quote as typical of the movement for consolidation the desire of the artisan castes in many parts of India to appear under a common name; thus carpenters, smiths, goldsmiths and some others of similar occupations desired in various parts of India to be returned by a common denomination such as *Vishwákarma* or *Jangida*, usually desiring to add a descriptive noun implying that they belonged to one of the two highest *varnas* of Hinduism, either Brahman or Rajput. Of the two, Brahman was usually desired at this census though in some cases a caste which had applied in one province to be called Brahman asked in another to be called Rajput and there are several instances at this census of castes claiming to be Brahman who claimed to be Rajput ten years ago. Of course this movement for consolidation with a new designation implying a high social origin is partially to be ascribed to a very proper desire to rise in the social estimation of other people. It is also attributable in some cases to a desire for the backing of a large community in order to count for more in political life. There is little evidence as yet that intermarriage is being practised within these consolidating groups, but it is a development the possibility of which may not be overlooked, and the Census Superintendent of the Central Provinces quotes "specific instances ..... of marriage between members of different sub-castes of Brahmans, and between members of different sub-castes of Kalars, whose union would formerly have been condemned". Another point that has been raised at this census is a difficulty of stating a caste in the case of intercaste marriages, which, few enough in pro-

Some new ranks claimed by old castes.

Old name.	*1921 claims.*	*1931 claims.*
Kamar ..	Kshattriya ..	Brahman.
Sonar ..	Kshattriya Rajput	Brahman. Vaisya.
Sutradar ..	Vaisya ..	Brahman.
Nai ..	Thakur ..	Brahman.
Napit ..	Baidya ..	Brahman.
Rawani (Kahar). ..	Vaisya ..	Kshattriya.
Muchi ..	Baidya Rishi ..	..
Chamar ..	..	Gahlot Rajput.

portion to the population, appear to be increasing in number and rather tend towards the feeling, already in existence as a result of other causes, that the splitting of Hindu society into a number of castes is dangerous to the body as a whole and that divisions corresponding to the four *varnas* of the Vedas are sufficient in themselves. There is, however, a very marked repugnance in all the castes who have anything to say about the matter to being designated *sudras*, though the term seems to have been quite respectable up to a comparatively recent date. On the whole it is fair to conclude that there is a tendency for the limitations of caste to be loosened and for rigid caste distinctions to be broken down, and if that be the case there seems to be little support for the argument that a return of caste at the census operates in the other direction. On the other hand in the present state of society it was not possible to dispense with that return since in a very considerable number of cases it is essential to a knowledge of the position in his environment of the individuals concerned. It is possible that in another ten years it may be feasible to substitute some other criterion and it would certainly be desirable, if it were so feasible, to adopt for census purposes some much larger grouping than that of castes. The use of *varna*, however, is quite impossible since practically every Hindu who claims to be a Hindu at all would claim to be either Brahman or Kshattriya. Even castes of Chamars in the United Provinces have dropped their characteristic nomenclature and at this census returned themselves as Sun-or Moon-descended Rajputs. This, of course, does not imply any correspondingly respectful treatment of them by their neighbours. It is obviously impossible for the Census authorities to do anything other than accept the nomenclature of the individuals making the return, since to discriminate and to allot to different groups would involve entering into discusssion on the basis of largely hypothetical data. Experience at this census has shown very clearly the difficulty of getting a correct return of caste and likewise the difficulty of interpreting it for census purposes. The Superintendent of Census Operations for Madras in this connection writes as follows :—

"Sorting for caste is really worthless unless nomenclature is sufficiently fixed to render the resulting totals close and reliable approximations. Had caste terminology the stability of religious returns caste sorting might be worth while. With the fluidity of present appellations it is certainly not ..... 227,000 Ambattans have become 10,000 .....Navithan, Nai, Nai Brahman, Navutiyan, Pariyari claim about 140,000—all terms unrecorded or untabulated in 1921 .....Individual fancy apparently has some part in caste nomenclature. For example, an extremely dark individual pursuing the occupation of waterman on the Coorg border described his caste as Suryavamsa, the family of the sun."

Many of the claims made and appellations used recall irresistibly the ruse of that hero of W. S. Gilbert's who "christened himself 'Darwinian Man'", and the difficulty of classifying by occupation is instanced by the fact that cultivation in northern India is a most respectable occupation whereas in certain parts of southern India it is largely associated with the "exterior" castes and is consequently less respectable. Similarly the term 'merchant' would cover all sorts of different social classes and units from the Gujarati *bania* to the gipsy Banjara. Moreover, though it is conceded that the position of individuals belonging to exterior castes (that is to castes hitherto described as "depressed") has been much ameliorated as far as public life is concerned, and that untouchability has in that respect been very appreciably reduced, all available information goes to show that in private intercourse, as in religious observances, the castes whose water cannot be accepted are held at as great a distance as before. In so far as their position has been improved it seems to be less the result of a change of heart towards them than of a concession by caste to caste for its own convenience and not by caste to outcaste for the benefit of the latter. The present position of the exterior castes is examined in an appendix to this volume.

The Tabulation of Caste.

183. For several reasons therefore the usual treatment of caste at this census has been modified. In the first place provincial Superintendents were informed that it was not necessary generally to tabulate figures of castes for which the Local Government did not regard such tabulation as important, while as the standard of population of castes for tabulation four per mille, instead of two per mille as in 1921, was suggested as a minimum. An exception was made in the case of exterior castes, and primitive tribes, with regard to which the instructions were that all should be tabulated, and in the case of a dozen or so selected castes of wide distribution

which might serve as specimens so to speak of society for all India purposes in Tables VIII, XI and XIV. In tabulating castes for Table XVII the method of 1901, retained in 1911 and 1921, has been abandoned in favour of the 1891 method in which they appear grouped roughly by traditional occupation, references being given in different groups to individual castes to enable examples to be found in the three tables of Civil Condition, Occupation and Literacy above mentioned. In reverting to the 1891 method of tabulating caste for Table XVII, the occupation scheme used has been as far as possible assimilated to the Bertillon scheme, which has long been the basis of the Occupational Table (X). Admittedly this method of tabulating caste is far from being entirely satisfactory, since it can only recognise traditional occupation, which is not always a non-contentious question, and cannot simultaneously recognise more than one of several traditional occupations for the same caste, as, for instance, basket-making, scavenging and music for Doms. It does, however, admit of associating together many castes which are nearly related in function and origin instead of divorcing them entirely on account of an alphabetical chasm between the initial letters of their appellations. It also avoids any semblance of arrangement by order of social precedence. All subsequent census officers in India must have cursed the day when it occurred to Sir Herbert Risley, no doubt in order to test his admirable theory of the relative nasal index, to attempt to draw up a list of castes according to their rank in society. He failed, but the results of his attempt are almost as troublesome as if he had succeeded, for every census gives rise to a pestiferous deluge of representations, accompanied by highly problematical histories, asking for recognition of some alleged fact or hypothesis of which the census as a department is not legally competent to judge and of which its recognition, if accorded, would be socially valueless. Moreover, as often as not direct action is requested against the corresponding hypotheses of other castes. For the caste that desires to improve its social position seems to regard the natural attempts of others to go up with it as an infringement of its own prerogative; its standing is in fact to be attained by standing upon others rather than with them. For these reasons an abandonment of the return of caste would be viewed with relief by census officers. This question is one which it will only be possible to determine when the time comes, but if the exterior castes were to agree to return their religion or their community as "Adi-Hindu" or by some similar adventitious label, it might be possible even to omit the return of caste, while in any case it would afford a collective term which might make it possible to ignore individual castes for the purpose of tabulation and a tentative experiment in this direction has been made in presenting Table XVII.

The Origin of Caste.

184. How far an abandonment of the return of caste would be a really popular move is rather a different question. Caste is still of vital consideration in the structure of Indian society and of intense importance as well as interest to the majority of Hindus. It impinges in innumerable ways on questions not only of race and religion but also of economics, since it still goes far to determine the occupation, society and conjugal life of every individual born into its sphere. Some consideration of its origin cannot therefore be avoided and a number of different explanations have been offered for the existence of what is, as it is found to-day, a system unique in the world, since there is no other country or nation which possesses anything approaching the elaborate caste system of India, nor is there any other country known to have ever possessed one of the same kind. It has been described on the one hand as leading to "a degree of social disunity to which no parallel can be found in human history*", though on the other it has probably played a very important historical role as a great contributor to political and cultural stability, and there is much that is true in the Abbé Dubois' eulogium of the caste system. Roughly speaking, there may be said to be five important theories of the origin of caste, apart from the minor variations and combinations of these five; there is first the traditional view of the origin of caste typified in the Code of Manu; there is the occupational explanation, of which Nesfield was the best known exponent; the tribal and religious explanation of Ibbetson; the family or gentile explanation offered by Senart, and the racial and hypergamous explanation of Risley. None of these explanations are at all satisfactory by themselves, though all contain a definite appreciation of what should perhaps be rather described as features than causes of the caste system. The

* Nesfield—*Brief View of the Caste System of the N.-W. Provinces and Oudh*, page 116.

nearest approach to a satisfactory explanation is probably to be found in two articles by Stanley Rice which appeared in the *Asiatic Review* in 1929. Even Mr. Rice, however, hardly seems to appreciate the full implications of the view he adopts*, while credit must also be given to Oldenberg for having seen as early as 1907, that tabus on commensality were pre-Aryan in origin.

Before attempting to suggest the true causes which have led to the growth of caste in India, it will perhaps be necessary to examine briefly the various views mentioned above. The first of these is the traditional view of which the Code of Manu may be taken as the prime exponent. Caste, according to this view, is based on four *varnas* or " colours " sprung from different parts of the Creator's body and subject to certain prohibitions as to marriage, food and occupation, breach of which has led to loss of position, while the enormous number of existing castes between which inter-marriage and commensality is banned, is accounted for by unions, licit or illicit, between one and another of these castes ; hypergamous marriages having given rise to clean castes, and marriages, which we may perhaps describe as hypogamous, between a male of a lower position and a female of higher, stigmatised as *pratiloma* that is ' against the grain ', having given rise to the out-castes who, though Hindu or at least quasi-Hindu by religion, are outside the pale of decent Hindu society. This traditional view is based on a Rigvedic hymn which, if it cannot be said to be spurious, is at least much later in composition than the bulk of the Rigveda. The view is generally discarded by all critics as an artificial systematisation composed centuries after the origin which it professes to explain, and has been clearly shown by Senart to be an attempt to interpret in terms of an Indo-European social system parallel to that of Rome an existing order, which, at any rate at the time of application, the terms cannot be made to fit.

The second view derives caste entirely from occupation. The principal exponent of this view was Nesfield who regarded the present division of Indian society into castes, which are largely occupational, as indicating the origin of the whole system. His position is supported by Dahlmann who likewise sees in a village community practising a particular trade or craft the origin of a caste through the formation of a guild which in course of time has become exclusive both in the matter of commensality and that of marriage. One of the arguments on which this view of the origin of caste is based is drawn from a supposition that the lowest castes in this scale are those which practise a craft in which no metal is used, the higher castes being those which involve the use of metal, the inference being that the non-metal using castes became closed guilds as a result of the arrival of subsequent peoples using metal, and these in their turn became closed guilds which did not intermarry with the former non-metal-using villagers. This theory will hardly stand critical examination. It is true that basket-making is an occupation of one of the lowest castes ; at the same time the blacksmiths' caste is very far from being more highly esteemed, though it must be considerably later in point of time, than that of the coppersmith or the goldsmith. Moreover, this scheme does not explain at all the varying positions of agriculturalists who are of low castes in certain parts of southern India but generally of respectable if not of high caste in northern India. It should be, however, mentioned in this connection that it does appear to be a custom in southern India or in parts of southern India to provide a craftsman, that is, a man of the carpenter's or blacksmith's or goldsmith's profession with a grave made of stone slabs in a cist form in place of the simple unlined grave which is given to a cultivator, and this does suggest either a difference in status or in custom between the aborigines and immigrants who brought in tools and crafts, or in the alternative some difference in eschatology between the cultivator and the craftsman. The parallel, however, which is drawn between caste and the guild system of the later Roman Empire, although at first it appears quite close, breaks down on examination. The later Roman Empire attempted to compel every person to follow the profession into which he was born, but this was purely economic in origin

* This applies also to Dr. Bonnerjea's hypothesis published in the *Indian Antiquary* in 1931. While criticising Rice for regarding caste as predating the Aryan invasion he regards the system as introduced by the Indo-Europeans, but nevertheless ascribes the institution to primitive superstition and to a belief in magic. Dr. Guha advanced a similar view in a thesis before Havard University in 1924. I agree in ascribing caste to a belief in magic, though I cannot accept the rest of Dr. Bonnerjea's hypothesis which appears to me to be contradictory. It may be added that the theory of caste here put forward was arrived at before I had seen either Rice's or Bonnerjea's articles and was independent of their conclusions.

and did not involve any ban on commensality between one profession and another, and what might appear to be a ban on intermarriage in that a man was compelled under certain conditions to adopt the profession of his wife's father, was really only an attempt to recruit persons for certain unpopular professions a shortage in which was inconvenient to the State. It is inconceivable that any such purely artificial system as a caste distinction based solely on function could possibly give rise to the vivid and lasting prejudices that accompany caste distinctions in India.

The third explanation of the caste system has been sought in a tribal origin. Ibbetson attributed the development of caste to a combination of tribal origins, functional guilds and ' a Levitical religion ', and he laid the greater stress in this on the tribe. It is quite clear that tribes are just as much responsible for the origin of certain castes as it is that certain castes are or have been in the past restricted to particular functions. At the same time Ibbetson's explanation of the origin of caste is really only a summary of certain observable features of caste. These features, that is, tribes, guilds and religious monopolies, have certainly contributed to the growth of the caste system, having no doubt done much to consolidate and perpetuate it, but they can in no sense be regarded as causes. They are features which are not unique and are common to many countries, whereas caste is something that is found nowhere else. Given caste, a tribe, a guild or a priestly order may very easily become a caste, but if the essentials of caste are not there to start with it is difficult to see how any of these groups with the possible exception of the priestly order, would be likely to develop into one.

The fourth attempt to explain caste that we have mentioned is Senart's ascription of its origin to the *gens* and to family worship. Here again we are unable to agree with the explanation put forward. The *gens* would appear to be essentially other than caste and to correspond to *gotra*, which so far from being synonymous with caste, definitely runs counter to it. A caste in India seldom if ever claims a common ancestor, though the *gotra* like the *gens* insists on common ancestry. Moreover the mere existence of a number of gotras within a caste, but not confined to it, seems to preclude Senart's supposition that the exclusiveness of caste originated in family worship.

The fifth explanation of caste is Risley's derivation from colour and hypergamy. This derivation appears to fail to explain satisfactorily the taboo on food and marriage. In order to base caste on hypergamy, Risley has found it necessary to postulate a fictitious point at which the result of intermarriage provides enough women to enable a society to close its ranks and become a caste, although there still exist outside it more women of the same community from which it has been drawing its wives and with whom it has been in more or less intimate relations. Apart from this consideration the nearest parallel to caste which can be found goes somewhat perhaps to support Risley's theory ; that is, the position of the negroes in the southern states of the U. S. A. Westermarck (*History of Human Marriage*, 1901, pages 365-7) supports this view ; but although separate carriages, separate restaurants and even separate towns are provided for negroes, no pollution takes place as a result of having negro servants and there is no hard and fast line which is really analogous to a caste division between, say quadroons and octoroons, nor have the many social factors, which have tended in India to produce similar results in regard to foreigners, such as the Moghals or the English, really succeeded in making Muslims or Anglo-Indians into a caste in the Hindu sense, and where Muslims form a real caste it is always one which has been converted from pre-Muslim inhabitants and retained its pre-Islamic organisation. Colonel Sewell points out an additional respect in which the parallel breaks down in that in the Indian case the superior population consisted of invaders presumably anxious to preserve their racial identity and their social superiority, whereas in the American case the negro was in the first instance imported for the purpose of providing labour. In any case, if we reject Risley's derivation of caste from race, we must nonetheless admit the part that *varna* has played in crystallising and perpetuating that institution, which could hardly have come down to posterity in its present form without having been subjected to the reagent of racial prejudice and discrimination.

Of recent Indian writers on caste, one, Prof. N. K. Dutt*, while criticising Risley adopts in effect his theory of origin, though attaching much more value to

* *Origin and growth of Caste in India* (Calcutta, 1931).

the code of Manu, and Mr. Hayavadana Rao*, and Dr. Ghurye† likewise regard caste as having arisen largely as a result of racial difference. The latter emphasises the factor of priestly manipulation by Brahmans attempting to maintain the purity of race of the Aryan invaders. Like the others the latter theory cannot be regarded as adequate in itself, and though it may represent an important contribution to the ultimate establishment of a hard and fast system, it does not appear probable on the face of it that priestly dominance could have effected so much, unless the essential factors of the system were already present and predisposed to be used for such a purpose ; and in this connection it seems necessary to draw attention to an important paper‡ by A. M. T. Jackson (J. A. S. B. III, No. 7 of July 1907) who points out effectively the contributions of political divisions and of the royal prerogative in early India to the formation of sub-castes. The latter author, however, explicitly disclaims any attempt to indicate the origin of the system, and it is with its ultimate origin rather than the process of its development that we are here concerned.

Seeing that light is required on the origin of caste it would seem not unreasonable, as in the case of religion, to examine first those cultures that survive in India least altered from antiquity in case they can illumine origins elsewhere obscured by changes and developments due to growing civilization and to external contacts. Caste, as it now is, is an institution which has grown and developed through many centuries, but since it is so firmly rooted in India, and since it is found nowhere else, it would appear almost certain, on the face of it, that its first beginnings are to be sought in India and not outside, and we have fortunately in the more inaccessible corners of this vast country still a few tribes whose primitive conditions of life have changed so little in a thousand years as to be witnesses of value. Pliny the Elder, writing in the first century A. D., mentions *Abariman*, the untamed hills of the eastern Himalayas, whose inhabitants are still spoken of by the Assamese in the precise term used by Pliny—*abari manu*, and Ptolemy, writing in the second, locates "the Nanga-logae, that is the realm of the naked" precisely where the *Naga log* are found today, some tribes of them still unclothed, still untouched by contact with the people of the plains, tribes who have never seen a white man nor a horse nor know what is gun-powder, and whose language is still unspoken by any one outside their own community save some of their immediate neighbours. Hinduism, Buddhism and Islam have never penetrated here, and caste as it exists in the plains is unknown and undreamed of, but nevertheless institutions are found which seem to throw a definite light on caste and religion as they have developed in another environment.§ Thus in the unadministered area to the east of the Naga Hills, where each village is an independent political unit, there is very often to be seen a distribution by villages of certain occupations. Thus some villages make pots but do not weave cloth ; others weave, and others again are occupied principally with blacksmiths' work, the one village bartering its products with its neighbours, when not prevented by mutual hostilities, in spite of differences of language, customs and sometimes perhaps of race between one village and another. Here we have clearly the occupational aspect of caste origins on which so much emphasis has been laid by Nesfield and Ibbetson, and indeed the remnants of such a condition seem to have survived in northern India until the Buddhistic age, as the Jatakas indicate that certain trades were localised in separate villages, some containing potters, others smiths and so forth, but it is not the only aspect. It frequently happens that upheavals in village politics end in battle, vendetta and sudden death, and that as a consequence part of a village community, usually an exogamous clan or sept, is compelled to migrate to some other village. It might be anticipated that a group of weaving families would be welcomed in a pot-making village which only obtained cloth by barter, and *vice versa*, and up to a point this is indeed the case ; numbers are strength and such immigrants are generally welcomed and allowed to settle and cultivate,—but not to ply their ancestral craft when that differs from the occupation of their hosts. That is tabu, and should the strangers insist on it they must again go elsewhere to some village in which it is permitted. Instances of this have occurred within the writer's personal knowledge, and the underlying feeling seems to be that the practice of the tabued craft will affect the crops and the fruits of the earth generally, perhaps, because it is an offence to the

* *Indian Caste System* (Bangalore 1931).

† *Caste and Race in India* (London, 1932).

‡ Pointed out to me by Dr. B. S. Guha to whom my acknowledgments are due.

§ *Cf.*, T. C. Hodson *Naga Tribes of Manipur*, p. 83, and *Genna in Assam*, J.R.A.I., 1906, p. 92.

ancestral spirits who are generally regarded as the source of fructification; or it may be that the particular form of *mana* or *aren* which enables the manufacture of the article made by the strangers is liable to neutralise the corresponding magic on which the traditional village industry depends. Here however there is generally speaking no tabu on commensality or on intermarriage, and for the sources of these aspects of caste we must look elsewhere.

For a possible source of the commensal tabu, however, we need not look far from that of the occupational one. The same Naga communities which we have been considering afford abundant instances of tabus on certain foods, of a vivid belief in *mana* or, as the Ao Naga calls it, *aren*, and of the magical effects of food on the consumer. It has already been pointed out (*v. sup.*, page 414) that certain foods are peculiar to certain exogamous clans, and are in many cases associated with clan ceremonial, and it may be offered as one hypothesis that the presence of strange craftsmen practising their craft is condoned or rather rendered less dangerous by the prohibition of intimate relations with them, reducing thus the inconvenient strictness of one tabu by erecting another which at the start may be less irksome. That this is in accordance with the spirit of the primitive society under consideration is demonstrated by the readiness with which in some tribes the proximity of Christian converts is tolerated, even though they cultivate on tabued days, provided they live outside the village fence and therefore form a more or less separate community, though here again commensality is not barred, except indeed in so far as the Christians refuse to eat such flesh as they are taught to regard as "meats offered to idols". Another hypothesis, and there is no reason to suppose the suggested explanations to be mutually exclusive, is the theory that the food of strangers is itself dangerous. Senart's citation of the tabu on strangers at the family meal would doubtless lead back to this and Rice's view of the tabu on commensality as derived from a belief in totemism agrees in effect with the hypothesis here put forward, since both depend for their force on the belief in *mana* and in the resulting tabu on food or other contacts which may be infected with the dangerous soul-matter of strangers; this soul-matter is particularly perilous if such strangers have new and, what is the same thing, mysterious arts and therefore magical powers. Thus when the writer was touring in previously unvisited Naga territory in 1923-24 he found villages which not only objected to accepting presents or purchase money of any kind from the strangers or to parting with any possession to them for fear of the influence to which they might thus become subject by proxy as it were, but they actually destroyed mats or other property lent to build shelters when the visitors who had used them had gone, and threw away their tainted coins in the jungle. The differentiation between cooked and uncooked food as a vehicle of pollution so familiar to any observer of caste in India is clearly traceable to this view of the infection, by the act of cooking, of the food cooked with the *mana* of the cooker. Similarly among the Maori, to quote Eldon Best, "the most soul-destroying thing according to native ideas" is *tamaoa*, deprivation of *tapu* by means of cooked food. A tabu on intermarriage could easily be traced to a similar source if not to the same one (among the Mafulu of New Guinea no girl who is not a near relative of a bachelor may even see him eat), and once accepted would be tremendously strengthened and indefinitely perpetuated by the practice of hypergamy and by the comparative racial exclusiveness as regards marriage of the Indo-European invaders of the 2nd millenium B. C.

The sentiments and beliefs, therefore, on which caste is based presumably go back to the totemistic proto-australoid and to the austroasiatic inhabitants of pre-Dravidian India and we may conceive of their becoming effective on contact with Dravidian-speaking strangers bringing new crafts from the west. Hence would arise local tabus against certain crafts and persons, tabus tending to become tribal and to erect rigid divisions between communities. Even in early vedic literature different words appear for identical occupations. With culturally superior strangers hypergamy must almost certainly arise, and if there came a foreign priesthood with the ancient sciences of south-west Asia, the belief in their magical powers would make them the most heavily tabued of all. The sea has receded in the Persian Gulf, and Larsa and Lagash, Ur* and Eridu were no great

* Indeed it is stated that "a bead of amazonite from the Nilghary Hills of India was dug up from a prediluvian layer at Ur", (O. G. S. Crawford in *Antiquity, VI 259*), but Mr. Mackay states that "there must have been other sources of green felspar as it was largely used in Egypt from pre-dynastic times downwards".

cry from Makranistan and the delta of the Indus, and it is hard to conceive that India was unknown to them before the barbarian invader swept down from the north; all the requisites for the growth of caste seem to have been present long before that date, and the fact that caste is still far stronger in southern than in northern India, and there is weakest in the Punjab, is of the greatest significance. It must have remained for the Indo-European invader, with that pride of race which has ever and everywhere characterised him, to have the effect of crystallizing, on the basis of a fixed social scale, the pre-existing tabus arising from magical ideas, ultimately resulting in an attempt to describe in terms of an intrusive Indo-Aryan society a social system really based on the tabus of pre-existing conditions. Hence the formalist fictions of the Code of Manu by which all castes are derived from four varnas and arranged in a scheme of which the practice of hypergamy is the key-stone. Obviously the fixation of the extensive and rigid restrictions typical of caste in its later form would take time to establish, and it is natural therefore to find allusions in the later vedas to the absence of any absolute ban on the taking of food cooked by sudras, and Apastamba's statement (II, 2, 3; a reference for which I am indebted to Rai Bahadur Ramaprasad Chanda) clearly suggests that for nonceremonial purposes it was not necessary to be so particular. It is therefore argued not that caste in its present form is not a post-Aryan development, but that the essential ingredients which made the growth of caste possible were of pre-Aryan origin and without them the development of caste would not and could not have taken place.

In this connection there is a bye issue worth consideration; that is the position in Manu's code of the *pratiloma* castes. The explanation of the degraded position they there hold is generally regarded as a more or less fictitious exposition of the hypergamous ideal, but even from the most diehardly hypergamous point of view it is a little difficult to see why the fruit of an hypogamous union should stand lower in the social scale than castes whose ancestors contained no drop at all of the blood of the patrician invader. Granting that for the sake of schematic balance and of the Aristotelian principle of *perversio optimi pessimum* the offspring of a Brahman woman by a Sudra should rank below that of a Kshattriya by a Sudra, it might still have been expected that either would be regarded as superior to a mere Sudra of unmixed blood. It is therefore suggested that Manu's rules of precedence are derived in this respect from social conditions in which the union of a woman of the invading race with one of the indigenous race was necessarily anomalous. Now if the invaders were, like the Indo-Europeans elsewhere, a patrilineal society and if the indigenous race was matrilineal as the original Mediterraneans seem to have been and as the Dravidian-speakers of Malabar still are, the fruit of a male invader and a female indigene would have a recognised position in either society under either the *makkathayam* or the *marumakkathayam* principle, and whether the marriage were patrilocal or matrilocal, but the issue of a female invader by an indigenous male would have no place in either. Since he could not claim kinship through his mother with her exogamous patrilineal class, nor through his father with his matrilocal matrilineal family, and having no claim on family property under either system, his position would tend to become degraded, which would account for the low status given in Manu's code promulgated at a date when the precise causes of the low position were no longer clear and called for some sort of formalist explanation. A reflection of this amalgamation of the two cultures is possibly to be seen in the employment by Hindus of the daughter's or sister's son or husband in certain rites as an alternative to the employment of a Brahman (v. *Punjab Tribes and Castes*, I, 392). It is hardly necessary to point out that such circumstances, under which patrilineal invaders took wives from matrilineal indigenes, would also operate very strongly towards the erection of a purdah system. The woman under the matrilineal system has a freedom not dissimilar to that of the man under the patrilineal. The woman taken from a matrilineal society and having ties of language, kinship, acquaintance and custom with that society, but expected to live according to strange and probably repugnant domestic and marital rules, could only be effectively restrained to that end by cutting off her freedom of movement in and association with the society to which she belonged. It may appear at first sight that the case of a Nambudri Brahman married to a Nayar wife is a contrary instance, since she does not observe purdah at all, but the fact that in this case the children follow the matrilineal system supports the argument that purdah was necessary to the combination of a patrilineal system with the

practice of taking wives from a matrilineal society. That purdah should exist so strongly in the case of the Nambudri wives of the elder sons must be explained by the necessity for maintaining a barrier against the encroachment of a matrilineal environment and by the probability that the Nambudri already practised purdah when they first arrived in Malabar. That the purdah system was alien to the Rigvedic Aryans when they invaded India, the Rigveda itself is a witness, while there is nothing whatever to associate it with the Mediterranean stock which seems to have followed the matrilineal system in which purdah has no natural place at all. It is perhaps significant in this connection that purdah is weaker in the south of India than in the north, and in Madras at any rate gets weaker from north to south, where, conversely, caste gets stronger. It is conceivable that the same circumstances gave rise to the practice of the pre-puberty marriage of girls as to that of purdah, and, infant marriage again is least prevalent in the extreme south.

The view that caste corresponds to race has here been rejected, as it is clear that the two do not coincide. The Brahman of the United Provinces has a long head (c. i. 73·1), he of Bengal a round one (c. i. 79·0); the cephalic index of the Chamar of the U. P. is 72·8, and that of the Bihar Chamar 76, and the same differences, which correspond, as explained later, to different migrations into India, are to be found likewise in other castes. At the same time that is not to say that there is no correlation of any kind between caste and race. Though curiously enough the relative position of the corresponding U. P. and Bihar castes in each pair named above is reversed according to that test, Risley's theory of the nasal index has a definite basis on facts. It cannot be denied that there is usually a clear relation between social status and the nasal index and that the latter varies according to the admixture of aboriginal, that is of proto-australoid, blood, though in regard to later immigrant strains caste cannot be similarly correlated to race on any systematic basis. Further in any consideration of caste and race it is impossible to overlook the effect of the famines which have frequently visited India in the past. Famine so severe as to reduce people even to eating their own kind is vouched for by more than one account,* and there can be little doubt but that from time to time such famines must have led to loss of caste on a considerable scale, and though where many have lost it together the result may have been merely the formation of sub-castes, small groups must have often been driven to associating with some caste lower in status rather than live an isolated existence. In effect therefore there must be racial elements common to all castes though in very varying degrees, and racial elements have again been imported into caste by the formation of castes from tribes. This process must have been common enough in the past, and indeed may still be seen working. Jats, Gujars, Kolis or Kaibarttas may be cited as examples in which the process is complete, while it is still in duration in the cases of Panikas, Gonds and Oraons, for instance, and it must frequently have happened that the chiefs of a tribe have ultimately been accepted as Rajputs while the rank and file have failed to achieve so high a status. It is similarly a commonplace that castes frequently owe their origin to religious sects which, after recruiting adherents from many sources, close their ranks to external marriage.

It has been pointed out that the social estimation accorded to any given caste in northern India depreciates from west to east. That is to say that under the hypergamous system it is much more common to take brides from the east and to give them to the west than the reverse. This at first sight would perhaps appear to be occasioned by the much greater shortage of women in proportion to men that is found in the north-west than in the east, but it seems far from impossible but that the practice has also been occasioned by the fact that the patrilineal races which have invaded India have come from the north-west and have hypergamously cavilled at giving their daughters to cousins whose blood was less pure, though showing less compunction in taking wives from such a stock. Just so is it commoner to find Europeans with Anglo-Indian wives than the reverse, and it is perhaps an implication of the same question that east coast Brahmans are, taken as a whole, regarded as less orthodox than those of the west coast.

Race.

185. The Census Report of 1901 laid the foundations on which has since been based all work that has been done on the racial composition of India, but the results of such work in the thirty years that have passed since that report was published have so far changed the whole complexion of the problem that a restatement of the

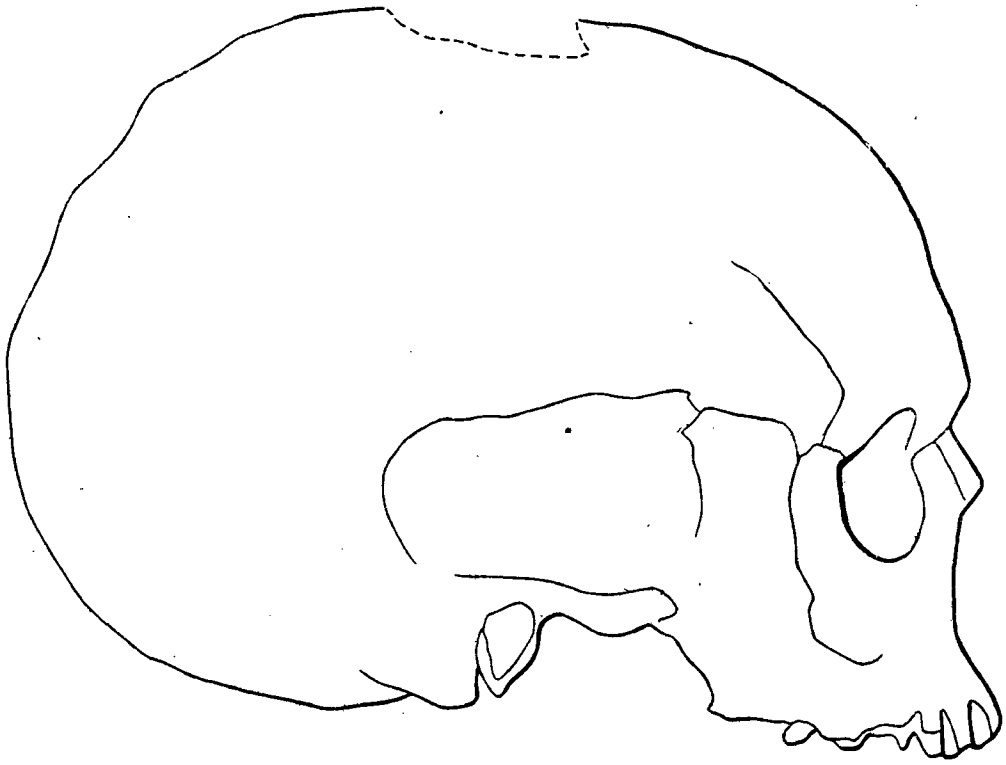
* For instance see pages 4 to 8 of Findlay Shirras' *Poverty and Kindred Economic Problems in India*. and *Travels of Peter Mundy, II*, pages 39—52 and 275, 276, Appendix A, and introduction pages lxiii—lxix.

position is now required. Risley's work remains, but his data have been supplemented and his conclusions must be revised. Roughly speaking he recognised three main racial types in India, the Dravidian, the Indo-Aryan, and the Turko-Iranian, the latter of which was confined to the North-West Frontier and the two former of which were modified by two subsidiary elements—the Scythian and the Mongolian, respectively introducing the brachycephalic elements found in western and eastern India. Risley's deductions were coloured by an erroneous belief in the ethnic isolation of India, and an analysis of India's racial ingredients is unfortunately a far more complicated matter than was then realised. Indeed, a later writer on the subject has likened India to a net collecting in its great peninsula the flotsam and jetsam of all Asia. In any case it is necessary to clear the deck by throwing overboard some of Risley's deductions. The Dravidian, as conceived of by him, has been the first to go, and has been replaced by at least three races where he recognised only one, so that the term Dravidian has acquired in consequence an ambiguity with reference to race which makes it essential to confine its use entirely to linguistics, and (except in quotations from other writers) it is only in a linguistic sense that it will be found in this volume. The element which Risley regarded as "Scythian" must be re-classified and re-examined. It is very doubtful if any "Scythian" invaders of India were ever numerous enough to make much impression on pre-existing racial types, and secondly what we know of Scythians suggests that they were probably at least as much dolicho as brachycephalic. In the east again it is impossible to accept the view that the brachycephaly of the Brahmans of Bengal is due to a Mongolian element. If that were so the degree of brachycephaly should increase inversely with social status, whereas the contrary is the case except where genuinely Mongolian peoples are concerned like the Maghs of Arakan; also the Brahman, most brachycephalic of Bengalis, lacks the epicanthic fold. Since 1901 important work has been done on history, such as the first volume of the *Cambridge History of India*, Pargiter's *Ancient Indian Historical Tradition*, Slater's *Dravidian Elements in Indian Culture*, or Chanda's *Indo-Aryan Races*, to name but four of many; on language, including the completion of the *Linguistic Survey of India* by Sir G. Grierson and Professor Sten Konow, the work done by P. Schmidt and more recently by Przyluski and others in Paris, by Morgenstierne on the Dardic languages and by Langdon on the Mohenjodaro signs; on archæology, such as the discovery and exploration of the Indus valley cities by the Archæological Survey, and the work done by Sir Aurel Stein in Baluchistan and the Makran, and on physical anthropology like the work of Haddon, Thurston, Dudley Buxton (*Peoples of Asia*) or Colonel Seymour Sewell's *Racial Ethnology of India* (VIIth Congress of the Far Eastern Association of Trop. Medicine, 1927) and his and Dr. Guha's *Excavations in Baluchistan* and their Chapter XXX of Sir John Marshall's *Mohenjodaro*, and Sir Arthur Keith's important appendix to Thomas' *Arabia Felix*. All this and much other such work has of necessity provided an entirely different conception of the early history of the racial composition of the Indian sub-continent. Mention has been made here of the merest fraction of the number of works that have definitely added to our knowledge of relevant facts since Sir Herbert Risley's great report.

The material available for the determination of the racial elements and affinities of the Indian peoples may be divided for practical purposes into physical, linguisitic and cultural features, to which a very brief attention is all that can be given here. The physical features are dealt with at length by Dr. Guha in the volume of appendices, easily the most important contribution to the physical anthropology of India since Risley's survey; the linguistic have already been referred to in Chapter X, and the cultural in Chapters VI and XI and elsewhere in this volume. It is merely necessary to indicate here the prehistoric cranial material available for a study of race in India. Of such material the important finds are few; Adichanallur and a few other places in southern India, Sialkot, Bayana near Agra, Nal in Baluchistan, and Mohenjodaro comprise the whole field of pre-historic craniology in India.* The important literature may be recapitulated as briefly—Lapicque, *Note Sommaire*, etc., *Bull. Mus. d'Histoire Naturelle*, pages 283-285 (1905) [quoted by Sewell and Guha], Thurston, *Castes and Tribes of S. India*, volume I, pages xxvi-xxviii (1909), Keith, *Journ. Anthropological Society of Bombay*, XI No. 6, pages 663-72 (1917) [quoted by Sewell and Guha], Elliot Smith, footnote on page 81 of Slater's *Dravidian Elements* (1924), and Sewell and Guha *Report on the Bones excavated at Nal* (Mem. Archæol. Survey of India No. 35, Appendix V) and Chapter XXX 'Human Remains' in Marshall's *Mohenjodaro and the Indus Civilization*. The general conclusion is that

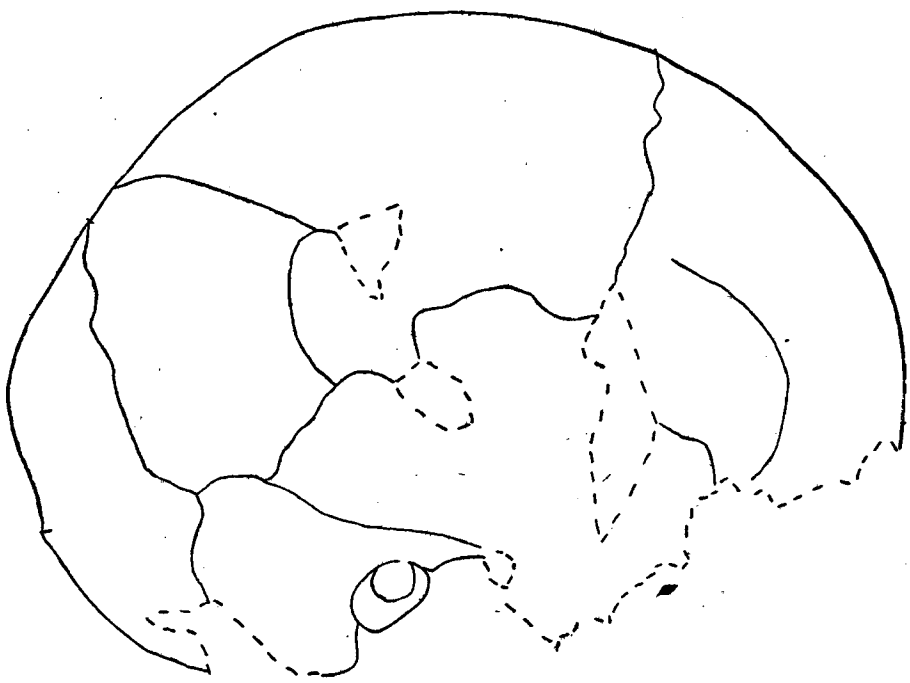
* For a map of ancient sites, etc., see the last page of this Chapter.

the Mohenjodaro skulls of the type described as Proto-Australoid are related to skulls of the "massive" type reported on by Buxton from Kish, to the skulls found at Adichanallur in southern India and to those of the modern Veddahs. One of the



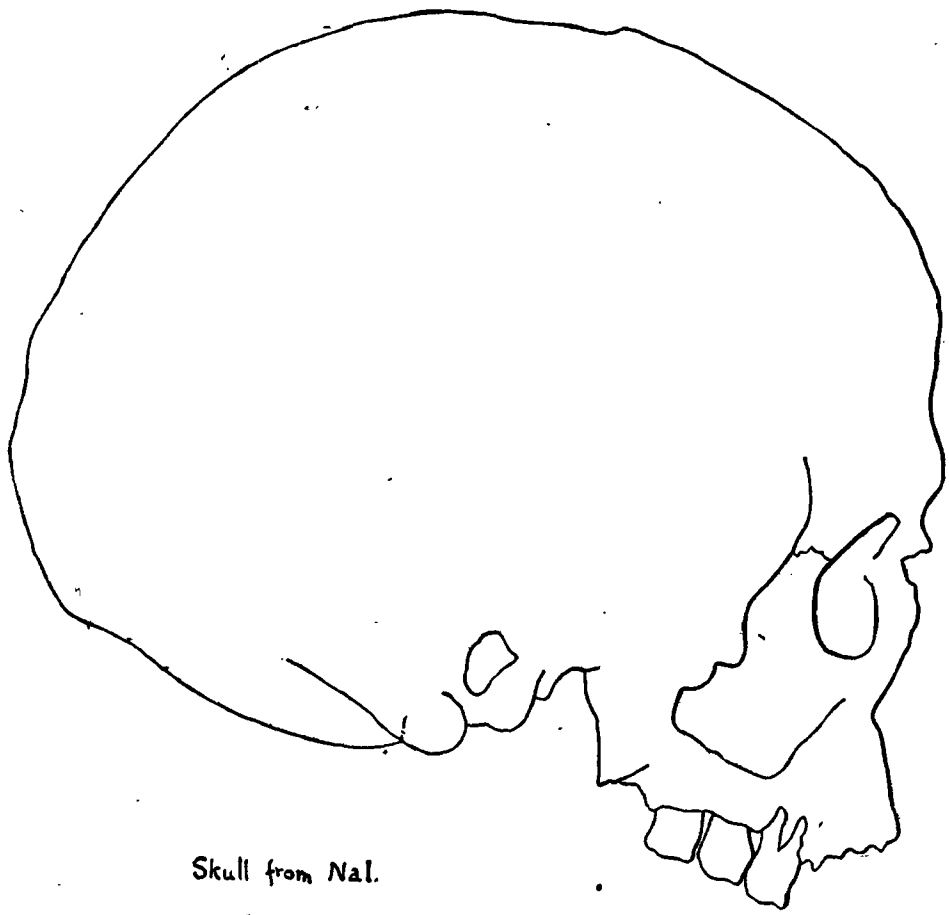
Skull from Adichanallur.

Adichanallur skulls was described by Elliot Smith as "indistinguishable from the early Egyptian type" that is, presumably, the Badarian, and the other as "well within the range of variation of that type". In his *Evolution of Man* he refers to these two skulls in somewhat different words: "One of them is clearly and unmistakeably Proto-Australian in type and the second one conforms more nearly to the racial type known as Mediterranean." The Mohenjodaro skulls of the type described as Mediterranean are related to the Sialkot and the Nal skulls and to the dolichocephalic skulls of Kish, Ur and Anau as well as to the Bayana skull. Mohenjodaro has also yielded one brachycephalic skull of Alpine type in immature condition and one typically Mongolian skull. The physical material for most of India's population seems to have been present in the Indus valley at an early date,



The Sialkot cranium.

The earliest inhabitants of the Indian Peninsula were probably negroid in type, and the Negrito, rapidly disappearing though he is, still survives in the Andaman Islands. His kinship to less isolated and therefore more hybridized tribes in the Malay Peninsula and in the Indian Archipelago is well established, but he has left few traces on the mainland of India and Burma. In the Kadars and Uralis of the forests of the extreme south of India occasional individuals with frizzly hair and low stature and negrolike features are very suggestive of survivals of the Negrito race. The theory of such a negrito survival in southern India, particularly among the Kadar, has several times been advanced, *e.g.*, by K. T. Preuss, Keane



Skull from Nal.

Sergi and Haddon. It has been as frequently denied, most recently by Dudley Buxton and by Eickstedt, but it must be taken as now definitely established by Dr. B. S. Guha, a reference to whose measurements and photographs in part iii of this volume will probably be admitted conclusive. Some survivals of this sort are after all only what would be expected, seeing that there are Negrito tribes still in existence in Indonesia, while Giuffrida-Ruggeri maintains the pre-existence of a coastal race of Negritos between India and the Persian Gulf and their survival in Susiana up to historic times*.

Giuffrida-Ruggeri also suggested that the brachycephaly of southern Arabia is due to an ancient negritoid substratum and that this is substantiated by the low stature of southern Arabs and their occasional curly hair. Sir Arthur Keith does not, however, put forward the suggestion of Negrito affinities in his analysis of the head forms of southern Arabia in Appendix I to Bertram Thomas' *Arabia Felix* (1932), though he confirms Seligman's conclusion that the southern Arab is brachycephalic, coming to the conclusion that despite a certain Armenoid admixture "there exists in South Arabia a brachycephaly which is relatively unique; a wide short skull of medium height, but with non-Armenoid dimensions (*i.e.*, postauricular length)". Dixon (*Racial History of Man*) suggests that this brachycephalic population of southern Arabia is Alpine in origin and would explain the negroid characters found as due to the importation of slaves from Africa. If Giuffrida-Ruggeri is right in postulating a Negrito strain along the Persian Gulf, it is conceivable that an African origin is thereby indicated for the distribution of Negritos in Indonesia. In the alternative, and the pre-existence of the Negrito in Elam or

* *First Outlines of a Systematic Anthropology of Asia*, page 50 (Calcutta, 1921). He quotes Hüsing *Volkerschichten in Iran* (Anthrop. Gesellsch., Wien, 1916), and Dienlafoy, *La necropole de Suse.*

Arabia can hardly be said to have been established, we can only postulate a very early distribution from Central Asia. The former origin would perhaps be more in accordance with Keith's view (*Human Races Old and New*) of three main types having arisen in Europe, Asia and Africa respectively, whereas the latter would be necessary to Hooton's view, which is ably supported by Sewell (*Origin of Man and the Population of India*), that dolichocephaly has its origin in Africa and brachycephaly in Asia. In the latter event we must perhaps conclude that the negroid characters of Negrito tribes are modifications as a result of an environment similar to that which has acted upon the Negro of Africa. In either case it is generally admitted that the Negrito represents the oldest surviving type of man and it is possible even that he preceded Neanderthal man, by whom, according to Griffith-Taylor, he was displaced and dispersed. In any case the Negrito seems to have been the first inhabitant of south-eastern Asia. As already indicated traces of his stock are still to be seen in some of the forest tribes of the higher hills of the extreme south of India, and similar traces appear to exist in the inaccessible areas between Assam and Burma, where a dwarfish stature is combined with frizzly hair such as appears to result from recent admixtures of the pure or virtually pure Negrito stock of the Andamans with blood from the mainland of India or Burma. There are also legends among the Kuki and Kachari tribes of Assam of former contact with and of the extermination of a dwarf race armed with bows and spears living in dense forest and of an implacable hostility such as that still displayed by the Jarawas of Great Andaman Island to all their neighbours. What, if anything, in the way of culture the Negrito has bequeathed to his supplanter is a matter for speculation, but since he has existed in the Andamans in a condition of hostile isolation for many centuries it is just possible that the bow is his invention. It is also to be noted that he possesses a cult of the *ficus* tree which is or has been associated in southern Europe, Africa* and Oceania with fertility and with the souls of the dead, as it still is in India, and that he also possesses his own version of the legend of the Path of the Dead to Paradise guarded by an avenging demon, which is so wide-spread in Indonesia and its neighbourhood. If he did not evolve these conceptions for himself and bequeath them to others, the fact that he possesses them at any rate points to their distribution at a very early period of human prehistory.

If the Negrito was the earliest inhabitant of southern Asia he must have been early displaced or supplanted by the Proto-australoid. This dolichocephalic type appears to have had its origin in the west. The view that the Australian is connected with Neanderthal man, though repeatedly rejected by weighty authorities, seems to die hard, since Hrdlicka apparently regards the Neanderthal as having contributed to existing human types, while Sewell (*Origin of Man, etc.*) appears to revert to that theory of Australian origins, and in his account of the Mohenjodaro skulls he definitely associates the Indian Proto-australoid type with the Australian aboriginal on the one hand and with the Rhodesian skull on the other. In this view he seems to have since been justified by the discovery near Mt. Carmel in 1932 of *palaeanthropus palestinus*, whom Keith describes as bridging "the gap between European Neanderthalians and more primitive forms of modern man." It is however also claimed that *homo soloensis* recently discovered in Java is the direct ancestor of the Australian aborigines. Nevertheless Colonel Sewell has himself pointed out to this writer the possibility of the derivation of the Proto-australoid type in India from a leptorrhine western type through a series of climatic modifications. What he writes is "a comparison of the Mohenjodaro skulls with those from Kish, Al-Ubaid, Aditanallur and the skulls of the Veddahs indicates that we have a transition-series commencing in the Kish skulls with a nose that is long and narrow, passing through the Al-Ubaid skulls where the nose is slightly shorter and broader, then through the Aditanallur and Mohenjodaro skulls in which these changes are more marked to the maximum alteration found in the Veddahs..... Similarly the series presents corresponding relations in the height of the orbit and the degree of prognathism, as well as in the bizygomatic breadth". He has added in conversation that the series could be prolonged unbroken from Kish westwards to terminate in an Anglo-Saxon skull, but would probably admit the possibility of modification by hybridization as a possible alternative to modifiation by climate.

* *E.g.*, among the Akikuyu; also in ancient Egypt where the *ficus sycomorus* was tenanted by Hathor, a goddess of bovine and Asiatic associations, who fed the souls of the dead with water (or milk ?) from the tree. Pictorial representations, says Mr. Mackay, are very common in tombs of the XVIII and XIX dynasties at Thebes.

Meanwhile Elliot Smith has emphasised the ikeness of the Adichanallur skulls to one type of predynastic Egyptian, and similarly pottery found in megalithic tombs in the Deccan has been stated by Balfour to have a close resemblance to that of predynastic Egypt, while lapis lazuli said to be from Afghanistan is found in early predynastic Egyptian graves, though according to Mr. Mackay it is more likely to have been from Persia, which was a prolific source of this stone and probably provided the quantities found at Sumer, whereas there has been comparatively little found at Mohenjodaro. Peake and Fleure regard this Badarian culture as likely to have introduced the microlithic flint implements of the 'Final Capsian' culture, and they state that the Hamitic dialects of north Africa are believed to represent the language of the Final Capsians and appear to have no relation to Dravidian; the safest hypothesis at present therefore appears to be that the Proto-australoid type in India is derived from a very early migration from the west and that its special features have been finally determined and permanently characterized in India itself. It is represented in its purest form in the Veddahs, Malavedans, Irulas, Sholagas and similar tribes in the hunting stage in Ceylon and southern India (where it often shows a strain of Mediterranean admixture and sometimes occasional traces of a negroid blend, as the kindred Sakai in Malaya), and perhaps in as pure a form as any in the nearly related Paliyans of the Palni hills, whose sole implement is the digging stick. But, apart from its extension into Indonesia to the east and possibly to south Arabia on the west, as a contributory element in the population of India it is to be found from Kashmir to Cape Comorin and from Kalat to the Karenni, particularly of course in the lower castes and much stronger in the south than in the north. It is this type which is primarily responsible for the platyrrhine and dark-skinned elements in India which decrease generally in accordance with the increase in the social position of the subject examined, but which are present to some extent in all castes, though but rarely in the highest castes of northern India. We have already seen that this type was present in Mohenjodaro, though it is not clear from Sir John Marshall's book that any of the skeletons that have been preserved from that site are of equal antiquity to that of their surroundings and the inferences to be drawn from the accounts given indicate that the human skeletal material is probably of comparatively late date and in any case does not afford a reliable clue to the character of its original inhabitants. What the contribution of the Proto-australoid race to Indian culture has been is not very clear, they probably introduced pottery, and they may have had the beginnings of a neolithic culture, since some of the Badarian celts in Egypt have their side ground to a flatsurface. Badarian pottery is perhaps the oldest known, and Peake and Fleure suggest that the first pottery was made from leathern models in the neighbourhood of the sources of the Tigris and Euphrates or north Syria, while Frankfort considers that the earliest Susa pottery had such an origin. The presence of the boomerang, as also of the blowgun in south India and in a rudimentary or degenerate form in Assam, may possibly be credited to them, and in the domain of religion probably totemism.

Like the Proto-australoid and unlike the Negrito the Melanesian division of the Oceanic Negroes is dolichocephalic, and the frizzly hair which is so typical of the Melanesian possibly indicates a hybrid origin, and it seems likely that the Melanesian represents a stabilised type derived from mixed Negrito and Proto-australoid elements. However that may be, Melanesian elements are apparent in India and Burma, though limited in distribution and doubtful in origin, as there seems to have been at any rate some slight migration from east to west which may have brought back with it certain cultural elements which had their source of distribution from India thus running their foil, so to speak, and greatly complicating analysis. As a physical type the Melanesian occurs very markedly in the hilly tracts that divide Assam from Burma, and in the Nicobars, in both of which areas it has a mongoloid admixture. It seems to occur also but without the same strong mongoloid element on the Malabar coast, though here it is easy to be misled by directly African elements, indications of which are plentiful enough. Culturally the Melanesian stock in Assam, Burma and in the Nicobars is associated with disposal of the dead by exposure and the separation of the skull, communal houses, head-hunting and a canoe cult. Its connection with the Indian Archipelago is marked by a series of striking cultural parallels between Assam and New Guinea, but as it exists nowhere in India as a separate isolated type with a culture of its own, and as the Indonesian

cultures, and therefore presumably those of New Guinea, seem to be generally derived from the mainland, it is impossible to isolate the Melanesian for examination not only from the Austroasiatic and Indonesian groups referred to below, but also from Malay intrusions which are present in Burma, in Assam and probably elsewhere.

The term Austroasiatic is a linguistic rather than a racial term and as such has been referred to above in Chapter X, where the questions involved in that of the Munda languages have been briefly discussed. Linguistic as it is however the term Austroasiatic has certain quite definite cultural association in India, Burma and Indonesia, the most prominent of which have already been mentioned, but to which might tentatively be added the practice of terraced cultivation, which north of the Godavari in India is found roughly corresponding to the distribution of Austric languages, though by no means universally. Thus the Sawara (*Sora*) of the Madras Agency Tracts have terraced fields which will almost compare with those of the Angami Nagas, while their cousins the Santals (*Hor*) apparently have not. It is however a practice that might easily be lost in the course of migration, and the Sawara (" Saharia ") of Central India has himself apparently lost it thus, or in the alternative has failed to acquire it. It has been suggested that the least unsatisfactory theory of the distribution of these languages is that they have migrated eastwards down the Ganges valley to the Bay of Bengal. The suggestion that they are connected with the agglutinative Sumerian language has more than once been put forward (*e.g.*, by Rivet in 1929) and apparently with some degree of plausibility, and in that case it seems likely that we must look still further west for their origin. Handy in his suggested map of Polynesian origins traces two courses of pre-historic migration from west to east, one round the coasts of India the other north of the Himalayas.* It seems reasonable to postulate an alternative route across India and the Bay of Bengal for Elamites and dwellers in Mesopotamia of the Mediterranean race to have reached the Indian Archipelago. For overlaid as it is with Pareoean elements and confused with submerged negroid races, the basic type of the nesiot race is generally regarded as Mediterranean in origin and as having derived even its pre-historic cultures from the mainland of Asia. It seems just possible that the leptorrhine features and fair skins so often to be seen among the Namasudras of Bengal which are so much at variance with their low social position may be due to settlements left behind in the course of this migration.†

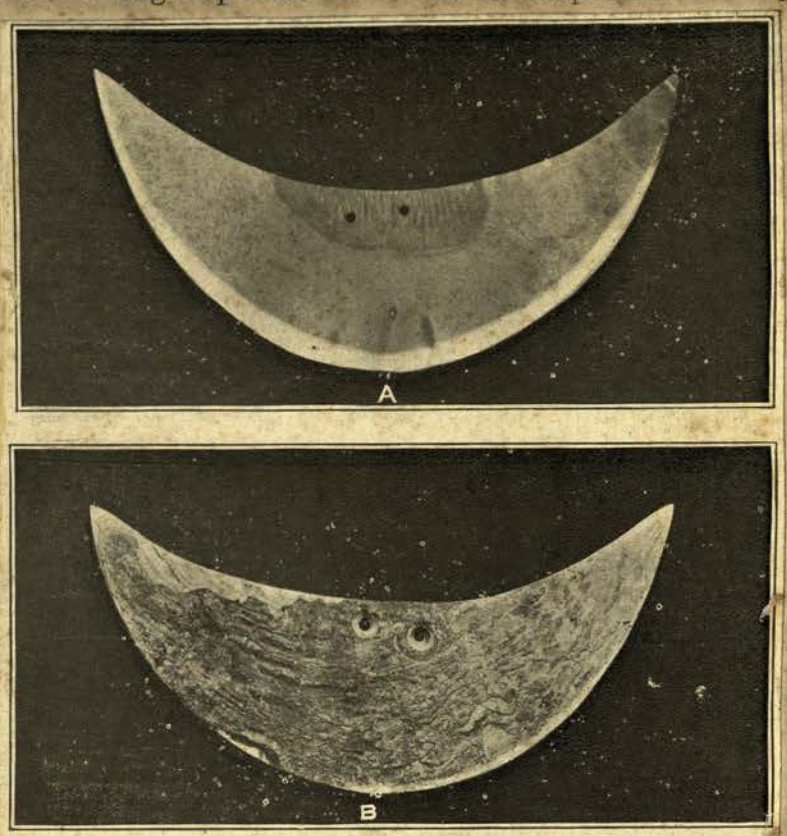
The possibility of repercussions from the Indonesian area westwards on India has already been mentioned in Chapter X. It seems definitely clear that there has been a movement north-westwards from the coast of Burma to the hills of Assam, and it is not impossible that similar movements have taken place from the east coast of India, as already suggested in an earlier chapter. It may be noted for instance that the Oraons according to a tradition quoted by Gait came from the Carnatic‡. It is true that they speak a Dravidian language but their culture is closely allied to that of the Mundas and it is wellknown how easily languages are changed. There are no recorded traces of any Austroasiatic language south of the Godavari, but no systematic examination of tribal dialects has been made there. There is much about Mysore, including a form of the shouldered iron hoe and terraced cultivation that is strongly suggestive of Indonesian culture, and the Paniyans of the Wynad, Coorg, and the Malabar ghats use a typically Indonesian method of making fire ; a typical Indonesian snare of the " scissors " type (*Man.* XXII, 103) was found by the writer in the hills of Travancore in 1931, and in the Cochin State museum in

* Terrien de Lacouperie argued for a migration towards the end of the third millenium B. C. from near the Caspian Sea across Asia to China where he supposes the migrants to have introduced the beginnings of culture and the germs of the Chinese script, and Peake (*Bronze Age and the Celtic world*, page 74 has suggested a resuscitation of that hypothesis, which might provide a vehicle for Rivet's connection of the Ainu language with the Sumerian and for a culture similar to that associated with Austroasiatic languages to each China though the date of this migration seems too late for that of the Austroasiatic speakers across India. Yunnan has clearly much in common with Indonesia, including elaborate terraced cultivation, but the general trend of migration and culture in south-east Asia seems to have been from north to south rather than from the islands to the mainland. Moderately longheaded skulls dated c. 3000 B. C. have been found at Anau (Peake and Fleure, *Priests and Kings*, page 189).

† It is possible to see in the Hindu tradition of the struggle with a buffalo-headed deity a struggle between the Aryan invader and a matrilineal buffalo-keeping race. The Mahishyas of Bengal might connect with those of Java, if *k'bo-Kewat, Kaibartta* [vide *Dt. Census of Midnapur* 1891, Hunter *Statist. Acct. of Bengal* (Raja of Mayanachoura) and J. R. A. S. 1877 VIII-X, page 16, part 9]. Is it possible to see in the title *Mahishi* given by the vedas to the chief queen a survival of the same culture ?

‡ The term Carnatic is usually applied to the lowlands between the Eastern Ghats and the Coromandel Coast. The temptation to derive *Oraon* from *Orang* must be shunned as they call themselves Kurukh.

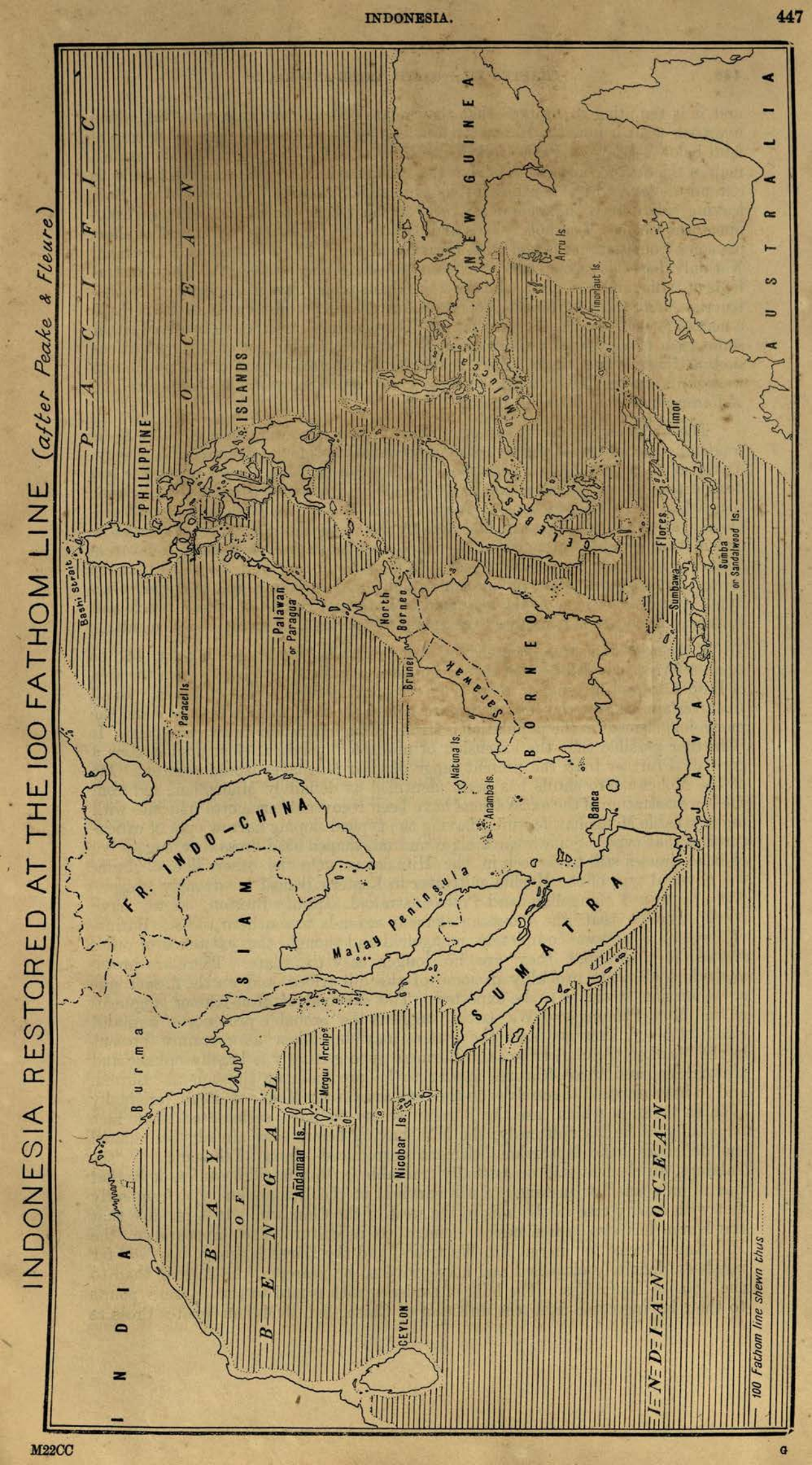
Trichur he saw a single specimen of a crescent-shaped mother-of-pearl breast



PEARL-SHELL CRESCENT (A *front*, B *back*) FORMERLY WORN BY NAYADI TRIBE, MALABAR COAST

From the only known specimen now in the Cochin State museum at Trichur

ornament extremely suggestive of Oceania, which was an obsolete ornament formerly used by the Nayadis, a wandering jungle tribe of Malabar. But it is possible that these stray parallels are to be connected with the Malabar Coast, which Indonesian voyagers have unquestionably reached at one time or another. It also seems possible that the vague suggestion of the mongoloid, which is so often given by the appearance of the hillmen of Chota Nagpur, of Bastar State in the Central Provinces and of the Madras Agency Tracts, may be due to a strain of Pareoean blood which has come in by sea from the east. One is insistently reminded in these areas of the Assam hill tribes, and both Haddon and Buxton have drawn attention to this strain, which struck the present writer quite independently and contrary to his expectations; and the admitted proto-australoid element in these tribes is no obstacle to this, since it must have extended at some period throughout what is now the archipelago to the Australian Continent, apart from the probability of its absorption on the mainland. Haddon says (*Races of Man*, page 108) " there is something in the facial appearance of many Kolarians which enables an observer to pick out a typical inhabitant of Chota Nagpur from a crowd of southern Dravidians and among some (Munda, etc.) there is often a reminiscence of Mongoloid traits ", and the truth of this is incontestable. A noticeable feature in the legends of the hill tribes of Assam is the story of a tremendous cataclysm in which the world was overwhelmed by fire followed by darkness and a formidable rise of waters. This tradition seems to be shared by the Mundas, and the Santals have a story of a rain of fire though apparently without a flood, while the Andamanese, the Nicobarese and most of the peoples of the Indian Archipelago have a somewhat similar story of a flood, though the preliminary rain of fire does not seem to appear in the accounts recorded, although a reminiscence of it perhaps appears in the Ongtong Java myth (*vide* Frazer, *Myths of the Origin of Fire*, page 53), and both in this and in one of the Sumatra myths there is a reference to the depression or submergence of the land below sea level, while the volcanic cataclysm is possibly to be seen in the Madagascar myth of the contest between Fire and Water. In the case of the eastern Assam hill tribes, however, the stories of the cataclysm occur repeatedly and all agree in indicating that the survivors of the rain of fire were driven by great floods up into the hills,


INDONESIA RESTORED AT THE 100 FATHOM LINE (after Peake & Fleure)
P A C I F I C
O C E A N
PHILIPPINE ISLANDS
Bashi Strait
Paracel Is.
Palawan or Paragua
North Borneo
Brunei
Sarawak
BORNEO
Natuna Is.
Anamba Is.
Banca
SUMATRA
JAVA
Flores
Sumbawa
Timor
Sumba or Sandalwood Is.
Tanimbar Is.
Aru Is.
NEW GUINEA
AUSTRALIA
FR. INDO-CHINA
SIAM
Malay Peninsula
Burma
INDIA
BAY OF BENGAL
Andaman Is.
Mergui Archip.
Nicobar Is.
CEYLON
INDIAN OCEAN
100 Fathom line shewn thus

and it is tempting to suppose that they relate to some volcanic upheaval, which overtook what is now the Indian Archipelago and was followed by a subsidence of land below sea level. Peake and Fleure (*Priests and Kings*, page 184) have made a map of the area reconstucting land at the 100 fathom line. The result of this is to extend the land area of south-east Asia to include Sumatra, Java, Borneo and Bali, leaving only narrow channels of sea between this reconstructed area and the Philippines, the Celebes, Lombok, Flores and Timor, and providing the easiest of short passages from island to island from Borneo and Bali to New Guinea and Australia. Not only does this reconstruction explain the connection between the Proto-australoids of India, and Indonesia, and the Australians proper, but if it is a correct reconstruction, and to account for the peopling of Australia in pre-historic times it is perhaps a necessary one, it is then clear that its disappearance must have involved either some great cataclysm or a series of smaller ones accounting not only for traditions such as those of the Assam hills but also for a dispersal of part of the population westwards having Austroasian languages and probably strains of Melanesian and of Pareoean or even Malayan blood.

The above speculation has been offered with some diffidence as likely to be condemned as fantastic, and indeed it is tendered in profound ignorance of geology. At the same time it may be permitted to a layman to observe that during the last decade the researches of acknowledged geologists have been somewhat seismic themselves, and the eruptions of Wegener and Kroeber have shaken several previously accepted hypotheses. Molengraaff and Weber have pointed out that the distribution of fresh-water fish in the Islands suggests that they had the elevation indicated in the not very distant past. In any case it may here be added that the theory put forward of an Indonesian cataclysm is anything but essential to an hypothesis of intrusions on the mainland of India and Burma of nesiot speech and culture. Even less is it required to explain the presence of mongoloid elements.

If the map of the area occupied by Tibeto-Chinese languages in para. 157 be again referred to it will be seen that although it may be said to fringe upon the area of Indo-European languages, there is a very considerable overlap in places. In all this overlapping area the Indo-European languages are definitely intrusive and the mongoloid element in the population is strong enough to retain its own languages. It is further possible that the extension of mongoloid physical elements has gone a good deal further than the present range of their languages would suggest. One of the Mohenjodaro skulls has been identified as definitely Mongolian, and from the lowest stratum of the excavations have been recovered terracotta figurines with unmistakable Mongolian features, having the typical sloping narrow eyes of caricatures of that type. Some wear a big round fan-shaped head-dress very suggestive of head-dresses still to be seen in the Himalayas. On the other side of India the physical type of the Muslim cultivator in Eastern Bengal is strongly suggestive of a mixed Mongolian and Proto-australoid strain. Buxton, as we have seen, suggests that the Pareoean element extends to southern India. Burma, of course, is almost completely mongoloid and though the existence of other strains is undoubted they are no longer easy to isolate. There are proto-australoid elements probably in some of the hill tribes, and on the Assam side a Melanesian strain is to be expected. The survival of Mon-Khmer languages in the Mon, Palaung and Wa tribes suggests the probable presence of a nesiot strain of blood likewise, and the strain may be taken as certainly present in the Mawken (Selung) tribe; the Burmese type generally is brachycephalic and platyrrhine, and these features appear to be predominant throughout Burma, and to have imposed themselves on the remnants of the Mons of Pegu, originally alien to them, in which case the Burman seems to have assimilated that race physically as he has culturally, the Mon having before that already assimilated the dolichocephalic leptorrhine element introduced from Telingana by the Talaings, an element still occasionally traceable in Mon families, unless it be that this is only another instance of the survival of the Indonesian type frequently met with at any rate in the hills to the west of the Chindwin. It is possible that the Karen has also some nesiot element, as in culture and appearance the Hill Karen seems to merge into Wa tribes, and the Karen language has so far not been definitely classified and may prove to be nearer to the Austric than to the Chinese-Tai groups. The bulk of evidence with regard to the Karens points to their having come from the direction of China, but McMahon quotes Cross as

recording a tradition that the Karens once lived to the east of a great body of water, "the largest in the world", which "runs backward to its source", and as interpreting this as the Bay of Bengal, but in that case it seems highly improbable that this *Kaw* or *Kho* would not have been explicitly pointed out as such, since the Karens are still in contact with the shores of that Bay. The Changs of the Naga Hills have a similar story of a great river far to the south that runs downwards till it meets a rock and thence with great force flows upwards, so that navigators are carried away. Handy has pointed out (*Polynesian Origins*) that from the Bashi Strait between Luzon and Formosa there rushes out "a current so strong that any sailing vessel sucked into it is flung out toward Micronesia". The Chinese called it "a monster that swallows unwary vessels", and Handy goes on to quote a Cantonese book of the XIIth century which says "To the east of Java is the great Eastern Ocean-Sea where (the surface of) the water begins to go downward; there is the kingdom of women. Still further east is the place where the Wei-lu drains it, the world from which men do not return". This he regards as a reference to the Bashi Strait, which is however, as he points out, north-east of Java. It is tempting to see in that current the river of Karen and Chang tradition, and it may be added that the Changs have other stories very suggestive of Mon-Khmer affinities, identical as they are with legends of the Khasis and Syntengs. Subsequent waves of Mongolian immigration have passed over Burma since, obliterating the traces of former movements and assimilating their stock, and both these processes have been intensified by the policy of massacre and deportation which makes the mediæval history of Burma so profoundly depressing to read. The race-movement of Mongolians southwards still continues among the Kachin tribes, while the Kuki-Chin tribes have barely settled down after reaching the Bay of Bengal and starting to work northwards again on the Assam side of the dividing ranges. The bulk of Burma in any case is primarily mongoloid, and any non-Mongolian streams of migration that may have reached India through Burma have absorbed a vast quantity of Mongolian blood. In Assam even the Khasis and Syntengs, though they have managed to retain their Austric language, differ little in physique from their Tibeto-Burman speaking neighbours. Elsewhere in India south of the Himalayas even Mongolian languages have not survived, and there is little trace of their influence except in the mongoloid cast of physical features that crops up unexpectedly with fair frequency in northern India, particularly along the foot of the hills. Their contribution to Indian culture west of Assam has probably been negligible.

From the east of India it is now necessary to turn to the west, and we have there to account for the presence of a non-Armenoid Alpine population of a brachycephalic leptorrhine type which appears indeed in Bengal in the east but is much more marked in the west of India, extending as it does from Baluchistan to Coorg, whence perhaps it has penetrated the extreme south-east of the peninsula. Risley explains this type as Turko-Iranian in the north, and as Scytho-Dravidian in the south, but there appears to be no justification, for his distinction, since there seems to be no change in type toward the south which is not explicable by assuming, and with every probability, a proto-australoid admixture increasing inversely to the degree of latitude. If "Scythian" has any precise meaning it must refer to the Saka, who appear to have been a dolichocephalic people probably nearly allied to the Indo-Aryans and unable to introduce the brachycephalic element even if they entered India in sufficient numbers, which is highly improbable. The Turki and Tungus invaders on the other hand were of Mongolian affinities and the type of brachycephaly which we are considering does not appear to belong to that family. In any case Crooke, Haddon, Giuffrida-Ruggeri and Buxton agree in rejecting Risley's diagnosis of the western brachycephaly and Chanda has offered a basis for a much more satisfactory hypothesis. He postulates a Tokharian-speaking branch of *homo alpinus* occupying the Pamirs which also invaded India only to find the middle of the Gangetic plain occupied by Vedic Aryans and therefore pushed round them to give rise to Grierson's "outer band" of Indo-European languages. The theory of an invasion of Alpines from the Pamirs as the explanation of west Indian brachycephaly may be unreservedly accepted. Indeed there is no other explanation which meets the facts. It is accepted by Haddon that "it is evident that there

has been a mixture with a strong brachycephalic stock, which must have belonged to the Eurasiatic group since there is no trace whatever of 'Mongolian' characters", though "there is no evidence to suggest when this immigration took place". Sir Aurel Stein's discovery of this type of Alpine in the region of Lob-Nor dating from the first centuries A. D. supports the hypothesis. It is not however possible to accept Chanda's hypothesis as regards date. It appears on the face of it that a much simpler and more satisfactory view would be to regard the brachycephalic stock as preceding the Rigvedic Aryans. We may suppose them to have entered the Indus valley during or after the Mohenjodaro period and to have extended down the west coast of India as far as Coorg forming the physical basis of several of the brachycephalic or mesaticephalic castes of western India—Prabhus, Marathas, Kunbis, Billavas, etc., and introducing the brachycephalic element into the Brahui. The brachycephals who remained in northern India will have at a later date been pushed outwards by the Vedic Aryans carrying the roundheaded element eastwards to Bengal down the Ganges Valley, where the Bengali element in the delta seems very definitely intrusive, forming a wedge between Orissa and Assam the inhabitants of which offer many similarities of custom, caste, religion and dialect in contrast to intervening Bengal. In support of the hypothesis that the Eurasiatic Alpine stock antedates the Rigvedic invasion Giuffrida-Ruggeri, who otherwise accepts Chanda's view, may conveniently be quoted. "Evidently", he says, "*the introduction of the brachycephals must go back to a pre-historic epoch*". The italics are his. Dixon (*Racial History of Man*, p. 265) suggests "the second or even the third millenium B. C." for the intrusion of this type into India, and supports the supposition that it preceded the Indo-Aryans. In another passage he suggests a movement of Alpines from the Iranian plateau as a result of the expansion of the Indo-European Kassites (who were raiding the Babylonian frontier before the end of the 3rd millenium B. C.), though he does not himself associate this movement with the Alpine extension in India. If we assume that these Alpines spoke an Indo-European language, of which there is no direct evidence, their distribution will fit in well enough with Grierson's theory of the "outer band" of Indo-Aryan languages, but it is an assumption which is not necessary to the hypothesis advanced or necessarily relevant to the question of race, though as Chanda has pointed out, Grierson finds traces of Pisacha dialects, of Pamiri origin, as far south as the Konkan, which supports such an assumption. The Chitrali (Khowar) are brachycephalic and speak an Indo-Aryan (Dardic) language. The Hunza-Nagar seem to be of mixed type* and speak Burushaski, an unclassed language unrelated so far as at present suggested to any recognised group. Khowari has a Burushaski element which Morgenstierne regards as due to contact. Grierson however says (*L. S.* VIII, ii, 6) "over the whole of Dardistan there is an underlayer of Burushaski words. These words are found far from the present habitat of Burushaski." We may infer that the Burushaski language is the original indigenous one and that the Pisacha languages are immigrant, possibly acquired by the brachycephalic Alpines through contact with speakers of an Aryan tongue before the pressure of the latter compelled them to migrate southwards, though the Khowari with a Sanskritic tongue appear to be more brachycephalic than their neighbours the Hunza-Nagars with a Burushaski one. The traditions of the pre-Rigvedic wanderings of the Aryans which are recorded in the Avesta, make it probable that the Aryans had come into contact with the Iranian Alpines long before they reached the Punjab (*v. infra* p. 458, 461). From north-western India their stream pushed on down through Gujarat, where the Pisacha tongue has since been overlaid by the midland Aryan (*vide* Grierson) and down the west coast, where it survives in Marathi and Konkani. In Kanara the language turns to a Dravidian one, but the brachycephalic element must have left the coast line for it is to be traced on the Mysore plateau (it is very strong in Coorg) whence it has passed to the Tamilnad, missing the Malabar Coast. It may probably be supposed to have remained in occupation of the more cultivable areas in north-western India till the Rigvedic invasion, and the association of type and frequently of caste between Gujarat and Bengal may possibly be put down to the

* Risley's measurements were brachycephalic, Leitner's mesaticephalic and Dixon's, the only series of any length, give a mean cephalic index of 77·41±26. The information as to Dixon's measurements was given me by Dr. Guha who tells me that he has received in Mss. from Professor Dixon the series of 92 heads measured.

dispersal west, south and east caused by the Rigvedic irruption. Associations have been recently traced between the Nagar Brahmans of Gujarat and the Kayasthas of Bengal; similarly there are Bagdes, Vagris and Bagris in Kolhapur, Gujarat and Bengal. Where they have not been disturbed they are peaceable and law-abiding cultivators and fishermen but the branch that got unsettled in the centre has never recovered and has ever since been criminally and nomadically inclined. This of course is hypothesis not history, but the closely connected caste of Bauri (Bawaria, Baori, etc.), can be definitely associated across India from Rajputana and Delhi, where it is restless and criminal, to the U. P., where it is less so, to Bihar and Bengal where it is a decent and peaceable caste closely associated with the Bagdi. Crooke says of it in the U. P. that it seems "to fall into two branches—those.....in the Upper Duab who still retain some of their original customs and manners" (*i.e.*, the criminal manners familiar further west) "and those to the east who.....have abandoned their original predatory life". We suggest that the peaceable life was the original one and that invasion on invasion, for the western Bauria must have suffered many, has been responsible for their anti-social proclivities.

To return to the Alpine immigration one consideration arises of an entirely different nature. Recent researches into the racial distribution of blood groups have shown that the predominance of group B in India is in strong contrast to western Europe, where group B is markedly absent. This group however increases in south-east Europe, a percentage of 18 being found in Silesia, 20 in Warsaw and, by Hoche and Moritsch, even in Vienna. In Russia the percentage of B group bloods rises rapidly, generally exceeding 20 %, reaching 29 in Perm and 32 in Krimtshack, the maximum recorded, and attention may be drawn in passing to the psychological affinity between Russia and India which has often been pointed out (also *v. supra* Ch. VI, para. 97). Further south the percentage is 20 in Transylvania, 23 in Macedonia. In the far east the percentage is higher than in Russia, China rising to 35 %, Malays to 29 % and Filipinos to 30 % and in one series even to 44 %. On the other hand the Japanese show percentages of B group ranging consistently from 19 to 23. In Africa percentages of B group go up as high as 29·2 but the highest percentages all seem to congregate on the mainland of Asia and the adjoining islands of Indonesia. The percentages in India itself run from 37·2 to 41·2, a marked contrast to the percentages noted in England which vary from 7·2 to 10·7 rising to 17·4 in Liverpool where there is probably an appreciable mixture of blood from the crews of foreign vessels*. Lattes' opinion is that it is definitely established that the distribution of blood groups in a given population is related to its ethno-anthropological constitution. Group A decreases going east and south from western Europe and B increases inversely, while O is characteristic of long isolated and marginal communities such as Australian aborigines, Eskimos and Laplanders. If the AB group be also taken into account and the total value of B be taken, the results, according to Lattes, show the value of B to be from 12 to 16 in western Europe, 20 to 28 in the Balkans, 28 to 43 in Russians, 44 in Gipsies and Chinese, 47 in Manchurians and 49 in Indians ("Hindus"). In Koreans the percentage is 39; in Indo-Chinese it falls to 36 and in Malays to 21. In Australian aborigines it is 4·5. Malone and Lahiri in the Indian Journal of Medical Research for April 1929 published some tests taken mostly on Indian troops and also on miscellaneous castes of the U. P. and on a number of so called "Dravidians" whose castes they do not distinguish and who were apparently low castes and primitive tribes of upper India, to whom the term 'Dravidian' is of very doubtful application indeed. The military castes they classified in groups according to Risley, and these groups it is better to ignore. The *p. q. r.* values have therefore been here worked out for the individual castes on Bernstein's formula, and the race-index on Hirszfeld's. The results place the Baloch with the highest index (1·00), then the Pathan (·95), Rajputs and Khatris (·88 each), "Dravidians" (·81), Jats (·74), Hindus of the U. P. (·72) and Hazaras (·67) last as might be expected, since their home is nearest the Pamirs. Taking B group

* These figures are all taken from Lattes' *Individuality of the Blood*, translated by Bertie, 1932. It may be noted that in that work the term "Indian" is always used with reference to American Indians, the term "Hindu", perhaps without its religious connotation, being used of Indians proper.

alone only the Baloch (24·3 per cent.) falls below 33 per cent., while the Hazara has 39 per cent. of B. These figures confirm Lattes' conclusions as regards India in general but suggest that a proper investigation of blood groups by caste would yield most valuable results. Clearly there is some factor at work common to Indians and to Manchus and in a lesser degree to eastern Europe and Africa. It can hardly be environment, as India and Manchuria have nothing in common, and it has been proved that blood groups are hereditary. The factor can hardly be Mongolian as it is not associated with the necessary physique in India or in eastern Europe. It is not Armenoid, as the Armenians have a low percentage of group B, and a similar factor in western Europe bars the Mediterranean and Nordic races. By a process of exhaustion the hypothesis is reached that this distribution of blood group B must be sought in the brachycephalic Eurasiatic race that seems to have spread from a centre in or near the Pamirs. The Ainu have been regarded by Haddon as an outlier of the Alpine race, and their likeness to the Russian peasant has frequently been remarked*; their blood groups show 32·7 to 38·5 per cent. of B; and Haddon in any case thus describes the range of *homo alpinus* :—"Galcha, Tajik, Wakhi, etc., of Persia, the Pamirs and neighbouring areas, and extending in a north-easterly direction to Manchuria". Add to that the southward extension to the Deccan suggested by Chanda and the distribution of B blood group fits well enough. One more item testifies to the soundness of this view. The Gipsies of Europe show blood groups with 44 per cent. of B, a figure approaching the Indian percentage; and the Romany tongue of the Gipsies of Europe, in common that is with Konkani Marathi, "still retains many forms which can best be explained by a Dardic origin" (Grierson, *Linguistic Survey*, I, 109). The accuracy of the theory can be tested. If it be correct the Telugus and Malayalis should show a lower percentage of B value than the Tamil and a still lower percentage than the Kodagu, the Maratha or the Gujarati.

Caste or Tribe.	No. of persons.	Per cent. of groups O.	A.	B.	AB.	Index A: B (Hirszfeld).	p. (Bernstein).	q.	r.	p+q+r.
Baloch	74	47·2	24·3	24·3	4·2	1·00	15·5	15·5	68·7	99·7
Pâthan ..	150	29·3	31·3	33·3	6·1	·95	20·9	22·2	54·1	97·2
Khatri ..	99	33·3	25·3	30·3	11·1	·88	20·3	23·5	57·7	101·5
Rajput ..	118	28·8	28·0	33·0	10·2	·88	24·4	24·7	53·6	102·7
"Dravidian" ..	589	24·3	27·5	36·8	11·4	·81	21·9	28·1	49·2	99·2
Jat ..	277	33·2	24·5	35·5	6·8	·74	17·2	24·1	57·6	98·9
U. P. Hindu ..	2,357	30·2	24·5	37·2	8·1	·72	17·9	26·1	54·9	98·9
Hazara ..	100	32·0	25·0	39·0	4·0	·67	15·8	24·6	56·5	96·9
Indians—										
(Malone and Lahiri). ..	3,764	32·3	26·3	33·7	7·7	·82	19·2	23·6	56·5	99·3
(Hirszfeld) ..	1,000	31·3	19·0	41·2	8·5	·56	14·9	29·1	55·9	99·9
(Bais and Verhoef).	348	37·9	23·0	31·6	7·5	·78	16·6	22·0	61·5	100·1

The Eurasiatic Alpine type, however, is not alone responsible for non-Mongolian brachycephaly in India. The Armenoid type of head, characterised by a very steep and high but flattened occiput and described as "hypsibrachycephalic" occurs frequently enough in India to be noticeable to a watchful eye. This type is probably a specialised off-shoot from the standard Alpine stock and appears to have arisen in the highlands of south-west Asia in the neighbourhood of which isolated communities such as the Druses and the Maronites still retain the old type with marked purity. While typical of Armenia and Anatolia, it is, generally speaking, still to be found sporadically all over S. E. Europe, Asia Minor and Mesopotamia, mingled in varying proportions with the dolichocephalic Mediterranean type. It probably constituted the most important element in the population of Sumer. In a type modified by hybridization, it is common enough in India, but does not seem to be confined to any particular caste though perhaps more often noticeable among Brahmans and Banias than among others, and is most common in Dravidian-speaking India and in the upland valleys of the east Punjab and the United Provinces. This race appears to have been at any rate partly responsible for the highly developed civilization of ancient Mesopotamia and Asia Minor and in both areas it has everywhere mingled with the Mediterranean race which it found in occupation. As we have little means of knowing the proportionate contribution by these two races to the early culture of western Asia, and thence to India, it will be safer to consider the two together as a blend

* Allusion has already been made (on the last page) to the psychological affinity between India and Russia; those acquainted with India only might refer to an article on Russian mentality in *The Fortnightly Review* for November 1932, by Mr. Harold Jenks.

to which the Mediterranean has contributed the most physically, while the Armenoid may have contributed more culturally. He is claimed as the principal contributor to the culture of Sumer and of Babylon, but the evidence does not seem to justify so exclusive a claim. On the other hand it seems to have been a blend of the Armenoid with the Mediterranean which produced the "prospector" type associated in western Europe with the early metallic industries and perhaps with megalithic monuments which seem in the Near East to be the result of "the interplay of Cycladic and Mesopotamian cultures". It seems likely that this type reached India either in association with the Mediterranean or in their footsteps, the latter being the more likely. Although at least one has been discovered at Harappa, no Armenoid skulls appear to have yet been discovered at Mohenjodaro, but the skulls found and preserved from this site are probably all of latish date, and do not necessarily represent the early inhabitants, while some of the stone statues are strongly suggestive of the Armenoid type of head. Thurston figures a typically Armenoid skull at p. xlvi of vol. I of *Castes and Tribes of Southern India* as a Hindu skull and speaks of its character as very familiar among all sorts and conditions in southern India, and the type is well represented in his photograph of a Banajiga.

The Mediterranean race appears to be the one that has contributed most to the physical composition of the peoples of India, and perhaps also to its culture. The centre from which it dispersed appears to have been the eastern Mediterranean, but that it reached India at a very early date is to be inferred from the crania found at Nal in Baluchistan, at Sialkot and at Bayana, which link the inhabitants of northern India to the dolichocephalic skulls of similar type found at Kish and at Anau. On the evidence of the Indian skulls Sewell and Guha conclude that "it would seem probable that the Mediterranean stock had become established in northern India at a period that clearly antedates the civilisation at Nal and along the Indus valley, and the differences that have been shown to exist between the human remains at Anau, Kish and Nal indicate that a sufficient length of time had elapsed for certain local variations to have become evolved and established" (*Excavation in Baluchistan*, p. 80). We may therefore infer that northern India was occupied by Mediterraneans before the Armenoid stock began to mingle with them, and it is possible that they were connected with the Indonesian race, now submerged, which seems to have left patches of speakers of Austroasiatic languages along both sides of the Ganges valley in the course of its migrations. Civilisation, however, appears to have its origins in the 'Fertile Crescent' which skirts the hills north of Mesopotamia from Syria to the Persian Gulf. This area was also occupied at a very early date by people of the same Mediterranean type, whose area of characterisation was on the shores of that sea and whose range in early neolithic times seems to have extended as far as the Indian Archipelago along the southern fringe of the mountains that stretch from Asia Minor to the Himalayas. They appear to have occupied the earliest sites at Susa and at a later date to have been also among the early occupants of Anau north of those mountains and near the Caspian Sea. Sir Aurel Stein's most recent discoveries in the Zhob valley have yielded stone implements of neolithic type, copper weapons and ornaments and painted pottery closely resembling that from culture strata ascribed to pre-Sumerian times in Mesopotamian sites, under conditions indicating prolonged occupation by a homogeneous culture of the sites excavated. Very close similarity is also found with remains from sites in southern Seistan, and there is marked resemblance to material from Mohenjodaro and Harappa. It seems likely, however, that the 'Fertile Crescent' contained from a very early period an admixture of racial types, and it was perhaps as a result of this that civilisation arose there, since "Rivers has shown that the establishment of contacts between peoples with different training and equipment produces new ideas and liberates initiative"* and the Sumerians whose civilisation, at any rate in this area if not in the world, is the oldest yet discovered, seem to have been of mixed race and to have included types of both the hypsibrachycephalic Armenoid and the dolichocephalic Mediterranean.†

* Peak and Fleure, *Peasants and Potters*, page 132.

† Peake and Fleure (*Peasants and Potters*, page 132) suggest also the probability of the presence of some of the dolichocephalic "Northern steppe-folk" (of Aryan affinities) and of Alpines from the Pamir.

A combination of Armenoid and Mediterranean is found in India, particularly among the Tamils, and that inter-communications took place between the Mohenjodaro civilisation and the ancient civilisation of Mesopotamia has been demonstrated by the discovery of objects of common type in both areas, and Sir John Marshall concludes that there was a "lively intercourse between the Indus valley and Elamite and Mesopotamian sites at the end of the fourth millenium B. C." The Mohenjodaro civilisation occupied according to Marshall the period between 3250 and 2750 B. C. and its connection with Mesopotamia is dated back to its very beginnings. It is assumed by Marshall that it developed in India but failing evidence to that effect it seems a much safer hypothesis that the main features came in from Mesopotamia, to the early civilisations of which it obviously bears a close affinity. Some points of this affinity have already been indicated (*e.g.*, para. 102 *supra*), and the fish-cults so numerous in India, but particularly in the east and south and on the Malabar Coast, are another case in point, but the question with which we are primarily concerned here is that of the race or races which imported or developed this civilisation. The worshippers of Indo-Aryan gods do not appear to have begun to encroach on the civilisation of the 'Fertile Crescent' till towards the end of the third millenium when a period of race movement began, possibly occasioned by climatic changes to the north. The Indo-European languages were, as we have already seen, preceded in India by both Austric and Dravidian languages and have been influenced by both, but while there is nothing to indicate that the speakers of the Austric languages had any advanced culture we find the Dravidian speakers of to-day not only having a culture of very great antiquity, but also one very strongly suggestive of Mesopotamian affinities, while its early megalithic cults surviving all over southern India and sporadically in northern and further India can hardly be considered without reference to the megalithic cultures of the Mediterranean. It is probable that there were direct contacts between southern India and Mesopotamia by sea, but the existence of the Brahui in Baluchistan makes the existence of land contacts equally likely. The Sumerian civilisation at the head of the Persian Gulf seems to have been largely dependent on the cultivation of the date; the Sumerians located their Garden of Eden in Dilmun, then also a date-bearing land, where is now Bushire on the coastal route to Makran, and the date is still the staple crop in the valleys of the Makran coast on the natural route between the ancient parts of Sumeria and the Indus delta, whether the medium of travel be land or sea. Maritime communications were certainly developing during the third millenium B. C. but early voyages must have been primarily coasting voyages. On the other hand a migration by a land route from Mesopotamia was probably at one time a matter of much less difficulty than it was found by Alexander's army, since at one time the whole of that now inhospitable area was undoubtedly fertile country, and apart from the Nal find already mentioned, Sir Aurel Stein's tour in Gedrosia in 1928 has disclosed scores of sites of ancient habitation yielding pottery, which links them with the earliest Susa zone, copper objects* and hundreds of terracotta figurines of the mother goddess (as at Mohenjodaro) and of the humped bull which is the *vahana* of Shiva. Everywhere in southern Baluchistan there are remains of enormous dams and *bands* proving that at one time the land was elaborately irrigated and pointing perhaps to the period at which its natural waters began to fail on account of climatic changes involving the undertaking of conservancy on a larger scale, and we are probably justified in picturing Baluchistan, a land of hills and valleys indeed but now barren and sandswept, as five thousand years ago a good land of fountains and depths, drinking water of the rain of heaven.

In either case the presence in Baluchistan of the Brahui, speaking a Dravidian language, living among remnants of a lost civilization, in a country rendered, inhospitable by a change of climate, professing a skin-deep allegiance to Islam but in practice worshipping at pre-Islamic shrines and phallic stones (*vide* Bray, *Census of Baluchistan, 1911*, p. 63), and using circles of stones to dance in, and

* Mr. H. Hargreaves found at Nal a copper tool containing a very high percentage of nickel. The nickel found in Mohenjodaro copper is definitely less, and it was stated at the Oriental Congress in Oxford in 1928 that the only copper ore containing so high a percentage of nickel was from Oman. The analysis of this copper adze was as follows:—*Cu.* 93·05%, *Ni.* 4·90, *Pb.* 2·14, *As.* traces, *S.*, *Fe.* *nil.* If the connection with Oman is proved, it increases the probability of migration by sea, as it presumably involves a maritime connection with the Arabian shore of the gulf.

exorcising devils by the dancing of medicine-men like the people of the Malabar Coast, points very suggestively to speakers of Dravidian languages as the ancient inhabitants of Mohenjodaro and perhaps the givers of culture to India, while the fact that they claim Aleppo as their place of origin and bury their dead to face westwards, indicates their ancient connection with Mediterranean. Bloch (*Bulletin de la Societé de Linguistique de Paris*, XXV; I owe the reference to Dr. Guha) has pointed out a connection between Malto, Kurukh, Kanarese and Brahui as distinct from the Gondi, Tamil and Telugu groups, and has indicated both the influence of the former group on Kashmiri and Syrian Gypsy, and also the very early connection between the Dravidian and Indo-Aryan languages; he regards the Dravidian languages of the Deccan as having definitely come southwards from northern India. Evidence is also forthcoming to indicate that Dravidian languages were at one time spoken in Gujarat, while Bloch's tentative suggestion that Brahui might be immigrant from the south-east not only seems unlikely on *a priori* grounds but is rebutted by Morgenstierne in his *Report on a Linguistic Mission to N. W. India* (Oslo, 1932). Rapson remarks that the reason why the Brahui has not been accepted as representing the Dravidian is that the racial character of the Brahui is Iranian and he adds that their tribal system is the antithesis of the caste system, and uses this argument to explain the change of racial character that he believes to have taken place. Haddon, however, says of the Dehwar and the Brahui that "in all essentials they belong to the dolicho-mesocephalic series" and must be regarded as a mixed type, while Bray reports that the Brahui skull is deliberately rounded in infancy, though babes are alleged to be born long-headed. Guha's opinion is that they were originally dolichocephalic but are now mesocephalic verging on brachycephalic as a result of a heavy admixture of Balochi blood, while artificial deformation possibly contributes to their roundness of head, a roundness which he agrees is accompanied by a long face.* As for their tribal system, it is true that strangers have been incorporated in considerable numbers, but there exists, in spite of their undoubtedly mixed racial type to-day, a very strong preference among the Brahui for endogamy (decidedly suggestive of the caste system, this) and by one authority the Mamashahi and the Nichari clans and the Dehwars are specifically reported to be definitely endogamous, and these are the oldest and aboriginal groups. Sir Denis Bray's report of 1911, shows that the traces of a former matrilineal system are clear enough, and the story recorded by Lieut. Carloss of his visit to the cave dwellings of Gondrani in 1838 (J. A. S. B., March 1839), when he was shown the palace of Badul Jamaul, the princess married by the stranger "a son of the King of Egypt" who became king of the matrilineal and matrilocal kingdom, is exceedingly suggestive of Mediterranean affinities, while the Shrine of Bibi Nāni near Hinglaj, also in Las Bela, is a place of pilgrimage "celebrated from the Euphrates to the Ganges" and the resort alike of Muslim and Hindu pilgrims. Sir Thomas Holdich says of it "the object of their veneration is probably the same goddess who was known to the Chaldeans under the same old-world name (Nana) a thousand years before the time of Abraham. Nothing testifies so strongly to the unchangeable nature of the geographical link formed by Makran between East and West than (*sic*) does this remarkable *ziarat* hidden away in the deep folds of the Malan mountains."† It has already been pointed out (para. 156) that the Dravidian language is now being found to have Mesopotamian and Caucasian affinities, and failing evidence to the contrary it is not unreasonable to conclude that the civilisation of the Indus valley was associated with speakers of Dravidian languages of Mediterranean race with an Armenoid admixture and a developed culture derived from the Near East. Indeed the Brahui themselves regard the Mohenjodaro ruins as the work of their own ancestors,‡ though it seems probable that this may be a *quasi*-tradition acquired from the suggestions of the excavators themselves. Moreover though this culture seems to have disappeared in the Indus valley it seems to have handed on to the later Indo-European invaders the pictographs

* Total facial length 117·77; facial index 89·34; nasal index 71·46; cephalic index 79·1.

† Quoted at page 36 of the *Las Bela Gazetteer* in the actual words here given. Nana or Nanai was the mother of Attis and identified with Ishtar, Astarte, Artemis, Anaitis or Aphrodite. Alone of her pilgrims devotees and unmarried girls pay no tax to the State. Naina Devi of the Kulu Valley, where her image is a black stone 3 ft. high, and of places in Sirmur and Bilaspur States, and probably elsewhere in the lower Himalayas, is likely to be the same goddess.

‡ Personal information from Mr. Mackay, the archæologist who was exploring the site.

from which their Brahmi script was derived, and unquestionably a number of elements in their language. How then and where did this take place? The cults and customs of Asia Minor are still strong in India, as also the Dravidian tongue, but it is clear that the fusion between the earlier civilisation and the Rigvedic Aryans did not take place in southern India to which the latter penetrated only in historic times. It did not apparently take place in the Indus valley and it must therefore have occurred in the Ganges basin where the middle kingdom has always been regarded as the true focus of Hindustan and the standard for the rest of Sanskrit India both of language and religion.

This is not only what might be expected on *a priori* grounds but it fits in convincingly both with known facts and with probable hypotheses. Sir John Marshall has pointed out that the latest date for the survival of the Mohenjodaro civilisation is early in the third millenium, and he has taken the jar burials at Harappa as indicative of the arrival of a fresh people with different customs. The practice of fragmented burial in jars appears to have very strong Iranian associations* and the Indus valley is right in the path of the Pisacha migration from the Iranian plateau and the Pamirs to the west coast of India. Here, it seems is the explanation of the break in continuity between the Indus valley civilisation and the arrival of the Rigvedic Aryans. We do not know at what date the Dravidian speakers pushed southwards to occupy the peninsula, but it seems likely that they must have taken a western route and have penetrated south India before the Alpines came in from the Pamirs. Some of the features of south Indian culture suggest not merely Asia Minor, *e.g.*, the fire walking ceremonies such as are common in south India and formed a feature of the worship of Artemis in Cappadocia, but Crete, where there was a cult of snakes†, which indeed were vehicles of the soul throughout Greece, and worship of the mother goddess, and where the vogue of slender waists for males is very suggestive of mediaeval Indian sculpture, while the popular sport among the Kallar and Maravar‡ of jumping onto enraged bulls with sharpened horns to pluck off a cloth put there for the purpose and prove themselves men in the eyes of their women folk is most reminiscent not only of the bull-baiting of Provence, where a rosette must be snatched from the points of the horns of an infuriated bull, but also of the bull-jumping scenes on Cretan vases, though in southern India the practice does not extend to somersaults nor to the fairer sex. Terracotta figurines of the mother goddess have been excavated in Crete not dissimilar to those from Mohenjodaro, and to others excavated in 1926-27 in Bihar at Buxar from a site 52 feet below the present surface and 13 feet below the Maurya stratum, indicating the extension of the Indus valley culture to the Ganges Valley and the Madhyadesa. The cult of the bull is common to the early cultures of Crete, of Egypt, of the Near East, of the Indus valley and of Hindu India. Dr. Guha points out that the brachycephalic admixture extends to the Tamilnad but not to the Andhradesa, a conclusion which is substantiated not only by the appearance of the people but also by their character, the Tamil being far the more pragmatical and more sensible of hard facts and economic values, whereas the Telugu has precisely that volatile, artistic and sensitive temperament that one is accustomed to associate with the Mediterranean stock. The Telugu, perhaps the purest Mediterranean stock in India, has in historic times been pushing up north-eastwards along the Coromandel Coast, and apparently the thrust of Alpines south-east across the Mysore plateau has failed to follow back north-eastwards just as it failed to penetrate the high ranges and heavy jungle of the Western Ghats which isolated the Malabar Coast from the brachycephalic influence.

If the hypothesis that the civilized inhabitants of the Indus valley were Dravidian-speakers be rejected, the only available alternative seems to be that they spoke some language of the Munda family. This is not impossible, and if the language of ancient Sumer was agglutinative as is Dravidian, so also are the Munda languages. The hypothesis however that the early civilization of India was Dravidian rather than Munda seems much easier to adopt, though it is still possible that it

* See for instance Sir J. J. Modi on *Gaurlappas*, Journ. Anthropological Society of Bombay, XIV, No. 3.

† The cult of snakes is also strong in the lower Himalayas, like Armenoid features, it is likewise found there in the significant company of Naina Devi, megalithic monuments, and marriage customs not unsuggestive of Babylon, and fertility rites which are spoken of by the *Punjab Castes and Tribes* as "Paphian" but which are not described. Devi in the hills is often spoken of as Devi Mai or Devi Mata—The Mother Goddess.

‡ In the case of the Kallar it is to be noticed that they include a boomerang among their wedding gifts, practise circumcision, and bury their dead and perform their Karuppan worship with the face to the north, probably indicating migration into India by land. The rite of circumcision is paid for the boy's father's sister, mother of his potential wife.

may have been first Munda-speaking and later Dravidian; any how it may be noted that the Munda themselves speak of Asuras as metal-using foreigners, while the Sanskrit-speakers in their turn used the term *asura* for a race found by them in India. If both these alternatives be rejected we are forced to suppose that the language spoken by the Indus valley civilization has totally disappeared, a supposition which seems, to say the least of it, highly improbable in view of the undoubted survivals in the field of religion, and it may here be pointed out that Przyluski (*Archiv Orientalni* IV, 2, August 1932, *vide Indian Antiquary*, January 1933) suggests a non-Indo-European origin for the name of the god Vishnu and a Dravidian origin for the god himself.

The early culture of the Mediterraneans and Armenoids in India may perhaps be most conveniently described as pre-Vedic Hinduism. Although this culture disappeared from the Indus valley, it must have survived across the Jamna with sufficient vigour to react to the Rigvedic Aryans whom it probably supplied with a script, and whose religious beliefs it ultimately submerged in its own philosophy. Slater* has aptly pointed out that Krishna himself was of Naga descent and the traditional blue colour in which Hindu art depicts him possibly represents the brunette colouring of the Mediterranean as distinguished on the one hand from the blond Aryans and on the other from the dusky aboriginals. Slater again points out that Sukra the chief priest of the Asuras is stated by the Mahabharata to have become "the spiritual guide of both the Daityas and the Devas", thus recording the success of the prevedic priestly class in imposing their spiritual authority on the Aryans also, and this same Sukra, or another one, according to the Vishnu Purana said *mantras* for the success of the Asuras and restored to life the Danavas slain by Indra. His father was the rishi Bhrigu whose sons were Brahmans and priests of the Daityas. Clearly there were Brahmans before the Rigvedic Aryans, and we must look for the origin of that caste in the priests of the presumably Dravidian-speaking civilisation who must have been acquainted with the mathematical and astronomical knowledge of contemporary Babylonia. At the same time it does not seem possible that the prevedic Hindu culture can have remained unaffected by the Iranian immigration from the Pamirs, which probably displaced it in the Indus valley during the 3rd millenium B. C. It seems that while the greater number migrated towards southern India by a western route, enough must have penetrated the Ganges valley to affect the physical features of a portion at any rate of the population. It is significant that the degree of brachycephaly in the Bengali castes decreases from Brahman downwards if we except the mongoloid groups like the Maghs.† We have also seen that enough of the prevedic civilisation remained to have a very definite and lasting influence on the religion and culture of the Rigvedic Aryans. The Alpine peoples have generally evinced a disposition for peaceful penetration rather than warlike domination and we may conclude that the irruption of the Pamiri invaders was less violent than that of their successors in the second millenium, and their settlements must have been rural rather than urban, in contrast to the Mediterranean-Armenoid culture. In fact the bulk of the descendants of the Alpine invaders are probably to be found in the great cultivating castes of Kunbis, Kurmis and Kapus representing the Tajiks of Iran (*vide* Keane, *Man Past and Present*, 1920, page 542), and it is worth notice that one of the Tajik tribes is spoken of as "Purmuli or Fermuli"; mutate *pf* for *kw* and then *k*, a philological process familiar enough, and the result is something very near 'Kurmi'. The prevedic Mediterraneans probably had a matrilineal system which would have facilitated the amalgamation of the Alpines, but it generally happens that people with such a system tend to substitute a patrilineal one where the two come into contact, and it is likely that the change from a matrilineal to a patrilineal system started to take place in upper India as a result of the Pamiri immigration, while it is not unlikely that the same process tended to substitute the worship of male for female deities. The process of Hinduising the female village deities of southern India by providing them with orthodox male husbands from the official Hindu pantheon is still perhaps in process. In Madura the fisheyed goddess Minakshi is annually so married with great pomp and *éclat*, but in the villages the goddess is still the real deity and protectress of the people rather than the recognised Hindu gods. So also in Bengal the *Dharma-puja-paddhati* records that Adyā, the mother of the gods, was married to Shiva with "traditional ceremonies not enjoined

* *Dravidian Element in Indian Culture*, pages 55 sqq.

† This conclusion is based on Risley, Dr. Guha's figures not being ready at the time of writing.

in the Shastras but somehow or other accepted as inviolable by them and known as stri-āchāra (lit. female custom) " performed by women before the Brahmans officiated (Sarkar, *Folk Element in Hindu Culture*, 231), and the same author maintains elsewhere that goddesses have been accorded (in folk-custom presumably) a higher position than the gods. According to the Mahabharata a matrilineal system survived in mediaeval India in the kingdom of Mahishmati about the Narbadā river, where the women had liberty to choose a plurality of husbands, and among the Arattas, somewhere apparently in the Punjab, " whose heirs are their sisters' children not their own ". With the exception of the Nambudris, who follow the Rigveda, Brahmans in southern India, many of whom at any rate follow the Samaveda Yajurveda or Atharvaveda, are accustomed to marry the daughter of their mother's brother. This, which Dr. Chanda has pointed out to me as " opposed to the letter and spirit of the Brahmanic code " is clearly a survival of a matrilineal system; orthodoxy would appear to enjoin the patrilineal prohibition of such marriages. The Pandyan dynasty seems to have been originally matrilineal as Tamil poems are said to allude to its founder as a woman, and the tradition recorded by Megasthenes is that it was founded by a daughter of Heracles, while Pliny describes the Indian people " *gens Pandæ, sola Indorum regnata foeminis* ". The worship of goddesses in whose honour annual fairs are held, is more important in the Himalayas of the Punjab and United Provinces than that of the orthodox gods, and such goddesses, though now regarded as incarnations of Devi, are frequently associated with the worship of snakes, while it seems likely that the Nanagotri Brahmans of Tehri-Garhwal represent families which originally traced their descent through the female line (*nana*=mother's brother). It is possible that the Pisacha variety of the Indo-European tongue was introduced at the same time as the Eurasiatic Alpine stock from the Pamirs, and either passed on to the Rigvedic Aryans the peculiarities it retained from the Dravidian it replaced, or never completely displaced its predecessor as the prevailing vernacular. An alternative hypothesis might be that the Pamiri stock did not cross the Jamna but migrated eastwards down its right bank thus leaving more or less intact the prevedic Hindus east of the Jamna and north of the Ganges until the narrowing of the valley towards the trijunction of the Son, the Ganges and the Gogra urged it across. However that may be, it is clear that the penetration of the Alpine element was much more limited in the east than in the west and that in the former at any rate it did not obliterate the pre-existing culture.

This prevedic Hindu culture, modified somewhat in all probability by contact with the Alpine, must have still been vigorous enough in the Madhyadesa to react to the stimulus of the Rigvedic Aryans, when these invaders, near cousins of the Kassites who about the same time overthrew the rulers of Babylon and established themselves as lords of Mitanni, occupied the Punjab about the middle of the 2nd millenium B. C. Their previous traditions as gleaned from the Avesta are conveniently summarised by Peake and Fleure (*Merchant Venturers in Bronze*, page 130). Driven from their northern home on account of its becoming ice-bound and uninhabitable they moved south to Sughda (Sogdiana) and Mura (Merv, Bokhara). Locusts and hostile tribes drove them to Bakhdi (Balkh) whence they moved to Nisaya. There they divided one part going to Haroyu (Herat) and the other probably to Kabul and thence to the Punjab at a date not later than 1400 B. C. and probably a century or so earlier. Their occupation of the country between the Indus and the Jamna, where the Rigveda seems to have been composed, but not written, must have taken the form of migratory movement and was probably effected without much difficulty. The description of their enemies as " noseless" suggests conflict with tribes of proto-australoid affinities, and there seems every probability that tribes such as the Bhils and the Chodhras would have continued to occupy hill and forest areas in spite of the Mediterranean and Alpine migrations. If the prevedic civilisation in the Indus valley had really declined, this may have enabled such tribes to re-occupy parts of the open country. The mention however, *e.g.*, in the *civ*th hymn of the first book of the Rigveda, of the cities, castles and great wealth of an enemy whose womenfolk bathed themselves in milk, suggests that the ancient civilisation was far from being extinct, and it is not impossible but that many aborigines were employed as servants and as auxiliary troops or as allies against the invader, a practice which was common enough in mediaeval India. The development of a written literature clearly took place at the second stage of their invasion described by Rapson as a colonising stage in contrast to that of mass migration. It is

just at such a stage that amalgamation with the pre-existing inhabitants is most likely, and the influence of the latter can clearly be traced in the change in vedic religion which appears even in the tenth book of the Rigveda, and in the Yajurveda, as well as in the Atharvaveda, for this last consists, principally at any rate, of magic while the pantheistic philosophy later developed in the Upanishads is already apparent in the tenth book of the Rigveda. Pargiter points out that though the name of the compiler of the Rigveda was well known to the later epic and pauranic tradition, the very mention of Vyasa is ignored or suppressed in Vedic literature. It is possible to infer from this that the immediate post-Rigvedic brahmans may have been the inheritors of the prevedic tradition which was adverse to the Rigveda and supported the indigenous deities by preference. It is possible that the contest between Vasistha and Viswamitra, as a result of which the Kshattriya became a Brahman, may symbolise the amalgamation of the two cultures, and Viswamitra's formal renunciation of Kshattriya ways the final ascendancy of the pre-Aryan religion. In any case it is more than probable that the post-Rigvedic literature, in which the 10th book of the Rigveda must be included, would contain importations from pre-Rigvedic indigenous tradition, while the cerebral letters acquired by the Indo-Aryan from the indigenous languages "play an increasingly important part in the development of Indo-Aryan in its subsequent phases", just as the use of rice and the areca nut, equally of pre-Aryan origin, have affected the subsequent developments on the cultural side. The development of the art of writing from the prevedic pictographs must have gone on simultaneously and was, as suggested by Macdonell, no doubt first used for purely secular purposes and was not at first regarded as proper for application to religious hymns and formulae. This would fit in well with its derivation from the signs on the Mohenjodaro seals which seem to have been primarily used for commerce, as cotton fabric bearing a seal impressed with an Indus valley stamp has been recovered from a prehistoric site in Iraq. It seems unlikely in the extreme that the language, religion and culture of the invaders could have been influenced by the pre-existing civilisation without an admixture of race taking place, and the fact that later tradition and literature definitely describes some of the rishis and their descendants as non-Aryan, indicates, that this admixture extended to the priesthood* as it probably did to all other classes. Thus the legends of the origin of the Baidhyas of Bengal, a caste not only of acknowledged respectability, and the repository of traditional medical knowledge, but also one which provided a ruling dynasty in the XIth century A. D., have been justly interpreted as indicating a matrilineal origin (*v.* Risley, *Census of India*, 1901, I, Ethnographic Appendices page 185), while another version definitely describes their descent as *pratiloma* in spite of its being ascribed to the Twin Brethren of Vedic mythology. It is tempting to see in the two strains the origin of the two great Rajput houses of the Sun and of the Moon, the latter typical of Mesopotamian cults while the former is more suggestive of the Rigveda. The Agnikula branch was probably added at a later date to include the conquering families of Hun or Saka origin. On the other hand the Brahman in the Rigveda seems to have been second in social importance to the Rajanya and it seems not impossible that traditions of the conflict between the Brahmans and the Kshattriyas and the extermination of the latter by Parasurama, represent a revolt against the Aryan aristocracy led by a priestly class of mixed origin, which would naturally have the support of the people in general. In the United Provinces the population from Brahman downward is predominantly dolichocephalic, but as the Mediterraneans were no less dolichocephalic than the (?) proto-Nordic Aryans, the Armenoid admixture being probably slight, their fusion with the Aryans would not be traceable in the cephalic index, though it would tend to a substitution of dark hair and eyes for the fairer colouring of the Aryans. The element of brachycephaly introduced by the Alpines would be again modified in the direction of dolichocephaly by the new comers, and it is thus that we find in all the castes of Bihar a higher degree of brachycephaly than in the United Provinces where the Rigvedic Aryan element is the stronger. On the other hand the platyrrhine element, indicating the proto-australoid strain is fairly constant in both races and appears with little respective variation in the two provinces, for instance, in the cultivating Brahmans or the Kurmis, though the cephalic indices differ considerably. Thus in Risley's arrangement by nasal indices (*People of India*, Appendix III, summary of measurements, *Aryo-Dravidian* type) the castes of the U. P. and of Bihar appear almost alternately, but if the series be re-arranged by cephalic indices the Bihar castes fall into a separate

* Some of the rishis actually appear to have had a sort of totemistic origin ascribed to them "Achela Muni was born of an elephant, and Kesha Pingala of an owl, and Agastya Muni from the *agasti* flower, and Kausika Muni from the *kusha* grass, and Kapila from a monkey, etc." (Quoted by Wilson, *Indian Caste*, I, page 297, from the *Vajra Shuchi*, a Buddhist *sutra*).

group of 74 and over. Risley's apophthegm that the nasal index indicates the social precedence of any caste was true enough, but he failed to distinguish between the proto-australoids, the true aborigines of India if it be correct that their characterisation was in India itself, and the Mediterranean, likewise dolichocephalic but leptorrhine not platyrrhine, who seems to have introduced civilisation and the art of working in metal. Even to-day in the Deccan an artizan who dies too poor to be burned is buried in a stone-lined grave of dolmen pattern while a cultivator is put into a plain earth grave. Risley's classification also failed to diagnose accurately the origin of brachycephaly in western India, and its extension across India to Bengal interrupted as it is by the dolichocephalic elements which both preceded and followed it. As pointed out by Childe, the great gift of the Aryans to India was neither their religion nor their physique but a vastly superior language with its corresponding opportunities for mental and cultural development.

It is not suggested that the above views are the final word on race in India, but it is submitted that the hypotheses put forward do offer a scheme into which the fact at present known will fit without distortion, and it will perhaps be convenient at this point briefly to recapitulate. The earliest occupants of India were probably of the Negrito race, but they have left little trace on the mainland of the peninsula. The Protoaustraloids who followed them and whose origin must be sought in Palestine, where up to the present the earliest ancestors of their race have been found*, may claim to be the true aborigines on the ground that their racial type was ultimately fixed in India. They were followed by an early branch probably of the Mediterranean race, speaking an agglutinative tongue from which the present Austroasiatic languages are derived, which migrated down the Ganges valley mingling no doubt with the Protoaustraloids and in the van at any rate penetrating to the farthest south-east of the Asiatic continent. This early branch of the Mediterranean race may have carried with it the beginnings of culture with a rudimentary knowledge of agriculture. They may also have taken the practice of erecting rude stone monuments and perhaps of primitive navigation. This migration was followed by a later immigration of civilised Mediterraneans from the Persian Gulf, but ultimately from eastern Europe, who brought with them the knowledge of metals but not of iron and were followed by later waves of immigrants and a generally advanced culture, which maintained a connection with the cities of Mesopotamia and evolved or developed the prehistoric civilisation of the Indus valley and in all probability a similar civilisation in the Ganges valley. All these immigrants were of the dolichocephalic type, but mixed with this last race, possibly even with the first comers but in any case as later settlers, was a brachycephalic element coming ultimately from the Anatolian plateau in the form of the Armenoid branch of the Alpine race. The civilisation which arose in India under the auspices of these races had developed by the end of the 4th millenium B. C. a high standard of comfort, art and sanitation in city life, and a religion which bears many resemblances to the earlier religions of the eastern Mediterranean. The language in use was probably Dravidian, and there was a pictographic script analogous to those in use in prehistoric Mesopotamia. This civilisation was flooded in the west during the third millenium B. C. by an immigration from the Iranian plateau and the Pamirs of a brachycephalic race speaking perhaps an Indo-European language of the Pisacha or Dardic family, the main course of which migration went down the west of India and across the Mysore plateau to the south, missing the Malabar coast which has thus preserved much of the ancient civilisation of Dravidian-speaking India. Another branch of these immigrants fewer in number penetrated the Ganges valley but was not strong enough to obliterate the Armenoid-Mediterranean civilisation, though it probably modified it a good deal. Meanwhile in the extreme east of India other movements were going on, as there was a widespread race movement of the southern Mongoloids southwards to the Bay of Bengal and into Indonesia, which had some reflex influence on India from the east. Finally about 1500 B. C. came the Indo-Aryan migration into the Punjab, which first occupied the area between the Indus and the Jamna and later sent colonies across the Jamna into Hindustan. These imposed themselves upon the surviving civilisation there, which so reacted to this powerful stimulant as to produce from the combined material the philosophy, religon, art and letters that were the glory of ancient India, though it yet remains for the descendants of those early races to accomplish the vision of the Bhavishya Purana and unite the peoples of India in the fulness of time to be of one caste, a united nation.

* Unless the recently found remains of "Solo man" in Java prove to be earlier.

SUGGESTED ROUTES OF EARLIER (*POST-AUSTRALOID*) MIGRATIONS INTO INDIA

MAP OF ANCIENT SITES TO ILLUSTRATE CHAPTERS VII, X, XI & XII

SUBSIDIARY TABLE I.

Race, Tribe or Caste.	Population in 1931.	Population in 1921.	Population in 1911.	Net variation Increase (+) Decrease (—). 1911-31.	Number per mille of the total population of Province, State or Agency. 1931.	1921.	1911.
1	2	3	4	5	6	7	8
Ajmer-Merwara.							
1. Brahman	27,670	23,643	24,220	+3,450	49·4	47·7	48·3
2. Chamar	15,915	12,278	13,351	+2,564	28·4	24·8	26·6
3. Daroga	10,182	8,579	8,952	+1,230	18·2	17·3	17·9
4. Dhobi	2,827	2,413	2,882	—55	5·0	4·9	5·7
5. Gujar	35,063	31,912	35,059	+4	62·6	64·4	69·9
6. Jat	29,992	25,896	30,497	—505	53·5	52·3	60·8
7. Kumhar	16,005	13,871	14,120	+1,885	28·6	28·0	28·2
8. Rajput	17,273	13,772	14,302	+2,971	30·8	27·8	28·5
9. Teli	4,773	4,126	4,406	+367	8·5	8·3	8·8
10. Anglo-Indians ..	1,232	746	710	+522	2·2	1·5	1·4
11. Europeans	1,676	1,442	1,755	—79	3·0	2·9	3·5
British Subjects ..	*1,524*	*1,400*	*1,702*	*—178*	*2·7*	*2·8*	*3·4*
Others	*152*	*42*	*53*	*+99*	*0·3*	*0·1*	*0·1*
Assam.							
1. Brahman	159,116	159,696	131,317	+27,799	17·2	20·0	18·6
2. Dhobi	30,919	33,466	33,946	—3,027	3·3	4·2	4·8
3. Kayastha	135,590	121,711	81,967	+53,623	14·7	15·2	11·6
4. Kurmi	26,331	27,980	24,520	+1,811	2·8	3·5	3·5
5. Mali	45,631	46,597	*	..	4·9	5·8	*
6. Namasudra	170,519	166,564	172,753	—2,234	18·4	20·8	24·5
7. Napit (Nai)	33,434	32,793	*	..	3·6	4·1	*
8. Rabha	69,154	70,491	79,022	—9,868	7·5	8·8	11·2
9. Teli and Tili	40,664	39,555	38,757	+1,907	4·4	5·0	5·5
10. Anglo-Indians ..	650	491	475	+175	0·1	0·1	0·1
11. Europeans	3,362	2,768	2,250	+1,112	0·4	0·3	0·3
British Subjects ..	*3,127*	*2,669*	*2,172*	*+955*	*0·3*	*0·3*	*0·3*
Others	*235*	*99*	*78*	*+157*	*0·0*	*0·0*	*0·0*
Baluchistan.							
1. Dehwar	5,317	5,433	7,326	—2,009	6·1	6·8	8·8
2. Lori	5,653	6,890	10,936	—5,283	6·5	8·6	13·1
3. Anglo-Indians ..	379	234	123	+256	0·4	0·3	0·1
4. Europeans	5,034	4,757	4,210	+824	5·8	5·9	5·0
British Subjects ..	*5,014*	*4,754*	*4,169*	*+845*	*5·8*	*5·9*	*5·0*
Others	*20*	*3*	*41*	*—21*	*0·0*	*0·0*	*0·0*
Bengal.							
1. Bagdi	987,570	895,397	1,015,738	—28,168	19·3	18·8	21·9
2. Baidya	110,739	102,931	88,796	+21,943	2·2	2·2	1·9
3. Bauri	331,268	303,054	313,654	+17,614	6·5	6·4	6·7
4. Brahman	1,447,691	1,309,539	1,253,841	+193,850	28·3	27·6	27·1
5. Chamar	150,458	152,372	136,553	+13,905	2·9	3·2	2·9
6. Dhobi	229,672	227,468	231,890	—2,218	4·5	4·8	5·0
7. Dom	140,067	150,263	173,991	—33,924	2·7	3·2	3·8
8. Goala	599,283	583,970	646,473	—47,190	11·7	12·3	14·0
9. Hari	132,401	148,847	265,679	—133,278	2·6	3·1	5·7
10. Jogi or Jugi	384,634	365,910	361,141	+23,493	7·5	7·7	7·8

* Figures not available.

SUBSIDIARY TABLE I—*contd.*

Race, Tribe or Caste.	Population in 1931.	Population in 1921.	Population in 1911.	Net variation Increase (+) Decrease (—). 1911-31.	Number per mille of the total population of Province, State or Agency. 1931.	1921.	1911.
1	2	3	4	5	6	7	8
Bengal—*concld.*							
11. Mumin (Jolaha) ..	270,292	255,164	282,705	—12,413	5·3	5·4	6·1
12. Kaibartta (Chasi & Jalia)	2,733,338	2,594,733	2,487,403	+245,935	53·5	54·5	53·7
13. Kayastha	1,558,475	1,297,736	1,113,684	+444,791	30·5	27·3	24·0
14. Kumhar ..	289,810	284,653	294,545	—4,735	5·7	6·0	6·4
15. Kurmi ..	194,652	181,447	176,779	+17,873	3·8	3·8	3·8
16. Namasudra	2,094,957	2,006,259	1,909,794	+185,163	41·0	42·1	41·2
17. Nai (Napit)	451,068	444,188	458,035	—6,967	8·8	9·3	9·9
18. Pod (Poundra) ..	667,731	588,394	536,568	+131,163	13·1	12·4	11·6
19. Rajbansi (Kshattriya)	1,806,390	1,727,111	1,808,790	—2,400	35·4	36·3	39·1
20. Rajput (Chattri) ..	156,978	125,513	130,221	+26,757	3·1	2·6	2·8
21. Tanti (Tatwa) ..	330,518	319,613	322,983	+7,535	6·5	6·7	7·0
22. Teli and Tili	503,189	491,832	419,122	+84,067	9·8	10·3	9·0
23. Anglo-Indians ..	27,573	22,250	19,833	+7,740	0·5	0·5	0·4
24. Europeans	23,030	22,730	25,451	—2,421	0·5	0·5	0·5
British Subjects ..	*20,904*	*20,016*	*22,327*	*—1,423*	*0·4*	*0·4*	*0·5*
Others	*2,126*	*2,714*	*3,124*	*—998*	*0·0*	*0·1*	*0·1*
Bihar and Orissa.							
1. Babhan (Bhumihar Brahman).	895,602	979,369	1,129,735	—234,133	21·1	25·8	29·4
2. Baniya	220,071	178,231	140,575	+79,496	5·2	4·7	3·7
3. Bauri	315,038	269,687	292,503	+22,535	7·4	7·1	7·6
4. Brahman	2,101,287	1,879,226	1,755,424	+345,863	49·6	49·5	45·7
5. Chamar	1,296,001	1,147,230	1,114,467	+181,534	30·6	30·2	29·0
6. Dhobi (Dhoba) ..	414,221	432,688	427,079	—12,858	9·8	11·4	11·1
7. Dom	269,346	218,733	241,903	+27,443	6·4	5·7	6·3
8. Dosadh	1,290,936	1,167,686	1,189,274	+101,662	30·5	30·8	30·9
9. Goala (Ahir)	3,455,141	3,192,242	3,250,415	+204,726	81·6	84·1	84·6
10. Hajjam	456,779	417,778	455,758	+1,021	10·8	11·0	11·9
11. Hari	115,613	103,602	119,468	—3,855	2·7	2·7	31·1
12. Jolaha	983,843	841,377	826,391	+157,452	23·2	22·2	21·5
13. Kayastha	383,435	344,022	347,613	+35,822	9·1	9·1	9·0
14. Khandait	1,010,146	822,016	769,353	+240,793	23·9	21·7	20·0
15. Kumhar	599,038	528,720	513,327	+85,711	14·2	13·9	13·4
16. Kurmi	1,452,724	1,315,417	1,312,832	+139,892	34·3	34·7	34·2
17. Pasi	172,061	150,136	150,142	+21,919	4·1	4·0	3·9
18. Rajput (Chhatri) ..	1,412,440	1,256,906	1,239,826	+172,614	33·4	33·1	32·3
19. Rajwar	133,952	109,323	131,971	+1,981	3·2	2·9	3·4
20. Tanti (Tatwa) ..	689,791	602,412	613,277	+76,514	16·3	15·9	16·0
21. Teli	1,210,496	1,076,705	1,071,906	+138,590	28·6	28·4	27·9
22. Anglo-Indians ..	6,638	4,134	3,405	+3,233	0·2	0·1	0·1
23. Europeans	6,389	6,346	6,316	+73	0·2	0·2	0·2
British Subjects ..	*5,675*	*5,745*	*5,646*	*+29*	*0·1*	*0·2*	*0·1*
Others	*714*	*601*	*670*	*+44*	*0·0*	*0·0*	*0·0*
Bombay (*including W. I. S. Agency*).							
1. Ahir	185,931	174,248	183,919	+2,012	6·1	6·5	6·8
2. Banjari (Banjara) ..	143,371	109,025	143,586	—215	4·7	4·1	5·3
3. Berad (Bedar) ..	206,883	186,434	184,871	+22,012	6·8	7·0	6·8

SUBSIDIARY TABLE I—*contd.*

Race, Tribe or Caste.	Population in 1931.	1921.	1911.	Net variation Increase (+) Decrease (—). 1911-31.	Number per mille of the total population of Province, State or Agency. 1931.	1921.	1911.
1	2	3	4	5	6	7	8
Bombay—(*including W. I. S. Agency*)—contd.							
4. Bhangi (Halalkhor) ..	123,375	121,747	140,714	—12,339	4·2	4·5	5·2
5. Bohra	137,957	132,299	126,011	+11,946	4·5	4·9	4·7
6. Brahman	1,128,941	1,030,119	1,067,681	+61,260	37·1	38·5	39·4
7. Chambhar	337,982	282,400	302,536	+35,446	11·1	10·6	11·2
8. Dhobi	84,348	79,752	79,707	+4,641	2·8	3·0	2·9
9. Kunbi (including Maratha).	6,434,861	5,832,488	5,768,726	+666,135	211·7	218·0	213·0
10. Kumbhar	297,700	265,816	254,542	+43,158	9·8	9·9	9·4
11. Mahar (Holiya and Dhed)	1,438,550	1,337,463	1,470,992	—32,442	47·3	50·0	54·3
12. Mang (Madig) ..	309,938	259,427	274,037	+35,901	10·2	9·7	10·1
13. Rajput	579,153	472,718	457,723	+121,430	19·1	17·7	16·9
14. Teli	187,054	167,146	168,848	+18,206	6·2	6·2	6·2
15. Vaddar (Od)	110,503	99,810	102,842	+7,661	3·6	3·7	3·8
16. Vaghri	89,067	86,114	82,016	+7,051	2·9	3·2	3·0
17. Anglo-Indians ..	16,646	10,543	9,175	+7,471	0·5	0·4	0·3
18. Europeans	26,533	33,863	32,727	—6,194	0·9	1·3	1·2
British Subjects ..	*24,338*	*31,041*	*28,983*	*—4,645*	*0·8*	*1·2*	*1·1*
Others	*2,195*	*2,822*	*3,744*	*—1,549*	*0·1*	*0·1*	*0·1*
Burma.							
1. Arakanese	259,866*	300,628	344,123	—84,257	17·7	22·8	28·4
2. Burmese	8,596,031	7,824,191	7,479,433	+1,116,598	586·1	592·2	617·4
3. Other Burman† ..	315,222	286,011	145,834	+169,388	21·5	21·6	12·0
4. Zerbadi	122,705	94,270	59,729	+62,976	8·4	7·1	4·9
5. Anglo-Indians ..	19,200	16,688	11,106	+8,094	1·3	1·3	0·9
6. Europeans	11,651	8,665	13,443	—1,792	0·8	0·7	1·1
British Subjects ..	*10,627*	*7,828*	*11,828*	*—1,201*	*0·7*	*0·6*	*1·0*
Others	*1,024*	*837*	*1,615*	*—591*	*0·1*	*0·1*	*0·1*
Central Provinces and Berar.							
1. Ahir	818,105	602,747	738,192	+79,913	45·5	37·7	46·0
2. Banjara	155,353	122,973	169,505	—14,152	8·6	7·7	10·6
3. Basor	54,987	44,046	52,947	+2,040	3·1	2·8	3·3
4. Brahman	517,765	457,377	445,744	+72,021	28·8	28·6	27·8
5. Dhobi	187,594	165,624	165,427	+22,167	10·4	10·4	10·3
6. Kayastha	38,829	34,330	33,584	+5,245	2·2	2·1	2·1
7. Kewat	197,035	174,542	169,395	+27,640	11·0	10·9	10·6
8. Kori	34,994	38,208	39,628	—4,634	1·9	2·4	2·5
9. Kumhar	131,311	121,408	118,520	+12,791	7·3	7·6	7·4
10. Kunbi	1,281,184	1,253,306	1,356,734	—75,550	71·2	78·4	84·6
11. Kurmi	317,399	301,747	302,588	+14,811	17·6	18·9	18·9
12. Lodhi (Lodha) ..	318,577	295,612	313,900	+4,677	17·7	18·5	19·6
13. Mang	101,226	84,239	83,660	+17,566	5·6	5·3	5·2
14. Maratha	287,189	206,144	93,901	+193,288	16·0	12·9	5·9
15. Mehra	1,307,962	1,170,737	1,165,177	+142,785	72·7	73·3	72·7
16. Nai	133,256	160,127	148,750	—15,494	7·4	10·0	9·3
17. Rajput	506,087	455,906	441,231	+64,856	28·1	28·5	27·5
18. Teli	1,022,881	890,240	869,370	+153,511	56·9	55·7	54·2

*Includes 51,615 Arakan Muslims.

†Here refers only to Danu, Intha, Tavoyan Yabein, Hpon, Taungyo and Yaw.

SUBSIDIARY TABLE I—*contd.*

Race, Tribe or Caste.	Population in 1931.	Population in 1921.	Population in 1911.	Net variation Increase (+) Decrease (—). 1911-31.	Number per mille of the total population of Province, State or Agency. 1931.	1921.	1911.
1	2	3	4	5	6	7	8
Central Provinces and Berar—*concld.*							
19. Anglo-Indians ..	5,065	3,574	3,488	+1,577	0·3	0·2	0·2
20. Europeans	5,650	5,892	7,333	—1,683	0·3	0·4	0·5
British Subjects ..	*5,124*	*5,627*	*7,033*	*—1,909*	*0·3*	*0·4*	*0·4*
Others	*526*	*265*	*300*	*+226*	*0·0*	*0·0*	*0·0*
Coorg.							
1. Brahman	2,723	6,187	2,521	+202	16·7	37·8	14·4
2. Kodaga	41,026	44,476	39,228	+1,798	251·2	271·5	224·2
3. Kuruba	6,867	7,335	7,394	—527	42·0	44·8	42·3
4. Vakkaliga	7,948	7,751	10,576	—2,628	48·7	47·3	60·4
5. Anglo-Indians ..	84	47	138	—54	0·5	0·3	0·8
6. Europeans	138	156	207	—69	0·8	1·0	1·2
British Subjects ..	*122*	*94*	*174*	*—52*	*0·7*	*0·6*	*1·0*
Others	*16*	*62*	*33*	*—17*	*0·1*	*0·4*	*0·2*
Madras (*including Cochin and Travancore*).							
1. Ambattan (Barbers) ..	362,592	255,532	234,876	+127,716	6·7	5·3	5·1
2. Brahman	1,473,836	1,564,111	1,401,566	+72,270	27·6	32·7	30·3
3. Chakkaliyan	613,942	550,245	529,060	+84,882	11·5	11·5	11·4
4. Maravan	437,411	459,786	373,138	+64,273	8·2	9·6	8·1
5. Pallan	857,329	878,689	877,354	—20,025	16·0	18·4	19·0
6. Telaga	699,089	604,123	498,762	+200,327	13·1	12·6	10·8
7. Vaniyan	250,449	220,117	211,037	+39,412	4·7	4·6	4·6
8. Vannan	215,356	252,595	288,447	—73,091	4·0	5·3	6·2
9. Anglo-Indians ..	31,201	29,495	30,219	+982	0·6	0·6	0·7
10. Europeans	13,076	11,291	15,382	—2,306	0·2	0·2	0·3
British Subjects ..	*11,204*	*10,182*	*13,108*	*—1,904*	*0·2*	*0·2*	*0·3*
Others	*1,872*	*1,109*	*2,274*	*—402*	*0·0*	*0·0*	*0·0*
North West Frontier Province.							
1. Arora	61,402	69,046	69,215	—7,813	13·1	13·6	18·1
2. Brahman	17,200	21,884	13,208	+3,992	3·7	4·3	3·5
3. Dhobi	11,870	18,644	14,877	—3,007	2·5	3·7	3·9
4. Khatri	35,046	44,792	35,720	—674	7·5	8·8	9·4
5. Kumhar	23,202	24,054	22,664	+538	5·0	4·7	5·9
6. Nai	27,242	27,335	24,777	+2,465	5·8	5·4	6·5
7. Teli	7,179	11,446	6,932	+247	1·5	2·3	1·8
8. Anglo-Indians ..	161	200	100	+61	0·0	0·0	0·0
9. Europeans	11,576	10,473	5,741	+5,835	2·5	2·1	1·5
British Subjects ..	*11,543*	*10,453*	*5,698*	*+5,845*	*2·5*	*2·1*	*1·5*
Others	*33*	*20*	*43*	*—10*	*0·0*	*0·0*	*0·0*
Punjab (*including Delhi*).							
1. Ahir	234,984	213,889	208,594	+26,390	8·1	8·4	8·6
2. Arain	1,334,629	1,093,116	977,601	+357,028	45·8	42·7	40·4
3. Arora	775,734	716,415	673,665	+102,069	26·6	28·0	27·8
4. Brahman	1,108,908	1,035,568	1,017,743	+91,165	38·1	40·5	42·0
5. Chamar	1,148,271	1,185,243	1,139,941	+8,330	39·4	46·3	47·1
6. Chhimba	96,269	125,570	129,338	—33,069	3·3	4·9	5·3

SUBSIDIARY TABLE I—*contd.*

Race, Tribe or Caste.	Population in 1931.	Population in 1921.	Population in 1911.	Net variation Increase (+) Decrease (—). 1911-31.	Number per mille of the total population of Province, State or Agency. 1931.	1921.	1911.
1	2	3	4	5	6	7	8
Punjab (*including Delhi*)—concld.							
7. Chuhra	1,114,797	1,125,201	1,235,103	—120,306	38·3	44·0	51·0
8. Dhobi	179,751	170,839	156,046	+23,705	6·2	6·7	6·4
9. Ghirath	124,340	137,153	171,129	—46,789	4·3	5·4	7·1
10. Kumhar	629,754	582,962	550,450	+79,304	21·6	22·8	22·7
11. Mali	91,534	101,850	193,579	—102,045	3·1	4·0	8·0
12. Nai	385,903	366,230	350,456	+35,447	13·2	14·3	14·5
13. Pathan	376,405	284,393	292,689	+83,716	12·9	11·1	12·1
14. Saini	165,190	129,523	112,719	+52,471	5·7	5·1	4·7
15. Sayad	312,480	260,980	247,388	+65,092	10·7	10·2	10·2
16. Sheikh	532,703	336,845	338,873	+193,830	18·3	13·2	14·0
17. Anglo-Indians ..	4,635	4,916	3,479	+1,156	0·2	0·2	0·1
18. Europeans	24,405	26,325	32,278	—7,873	0·8	1·0	1·3
British Subjects ..	*23,732*	*25,863*	*31,732*	*—8,000*	*0·8*	*1·0*	*1·3*
Others	*673*	*462*	*546*	*+127*	*0·0*	*0·0*	*0·0*
United Provinces of Agra and Oudh.							
1. Ahar	427,170	419,992	269,604	+157,566	8·6	9·0	5·6
2. Ahir	3,896,788	3,691,294	3,903,745	—6,957	78·5	79·4	81·3
3. Brahman	4,555,965	4,513,264	4,701,179	—145,214	91·8	97·0	97·9
4. Chamar	6,312,203	5,842,900	6,083,401	+228,802	127·2	125·6	126·7
5. Dhobi	776,159	709,262	725,719	+440	15·6	15·2	15·1
6. Julaha	1,005,203	882,023	991,263	+13,940	20·3	19·0	20·7
7. Kahar	1,154,961	1,083,938	1,112,421	+42,540	23·3	23·3	23·2
8. Kayastha	478,657	452,911	485,073	—6,416	9·6	9·7	10·1
9. Kewat	550,162	482,963	445,121	+105,041	11·1	10·4	9·3
10. Khatik	215,531	177,264	182,495	+33,036	4·3	3·8	3·8
11. Kori	923,410	798,817	860,434	+62,976	18·6	17·2	17·9
12. Kumhar	782,639	699,528	726,361	+56,278	15·8	15·0	15·1
13. Kurmi	1,756,214	1,748,217	1,890,371	—134,157	35·4	37·6	39·4
14. Lodha	1,099,225	1,043,842	1,114,408	—15,183	22·2	22·4	23·2
15. Nai	906,457	857,370	912,828	—6,371	18·3	18·4	19·0
16. Pasi	1,460,326	1,338,446	1,311,415	+148,911	29·4	28·8	27·3
17. Rajput	3,756,936	3,468,884	3,657,557	+99,379	75·7	74·6	76·2
18. Teli	1,005,558	937,729	968,132	+37,426	20·3	20·2	20·2
19. Anglo-Indians ..	11,272	9,267	8,094	+3,178	0·2	0·2	0·2
20. Europeans	23,501	25,161	33,411	—9,910	0·5	0·5	0·7
British Subjects ..	*22,061*	*24,443*	*32,811*	*—10,750*	*0·4*	*0·5*	*0·7*
Others ..	*1,440*	*718*	*600*	*+840*	*0·0*	*0·0*	*0·0*
Baroda State.							
1. Bhangi	31,026	27,549	26,406	+4,620	12·7	13·0	13·0
2. Brahman	123,714	113,825	113,412	+10,302	50·6	53·5	55·8
3. Chamar	42,884	35,147	32,210	+10,674	17·6	16·5	15·8
4. Dhed	107,988	99,627	99,806	+8,182	44·2	46·8	49·1
5. Ghanchi	21,726	16,408	16,481	+5,245	8·9	7·7	8·1
6. Hajjam	29,164	26,355	26,266	+2,898	11·9	12·4	12·9
7. Kanbi	502,888	434,469	402,657	+100,231	205·8	204·3	198·1
8. Kumhar	51,893	43,769	43,733	+8,160	21·2	20·6	21·5

SUBSIDIARY TABLE I—*contd.*

Race, Tribe or Caste.	Population in 1931.	1921.	1911.	Net variation Increase (+) Decrease (—). 1911-31.	Number per mille of the total population of Province, State or Agency. 1931.	1921.	1911.
1	2	3	4	5	6	7	8
Baroda State—*concld.*							
9. Maratha	12,165	13,326	14,785	—2,620	5·0	6·3	7·3
10. Vaghri	35,805	30,659	28,129	+7,676	14·7	14·4	13·8
11. Anglo-Indians ..	63	44	82	—19	0·0	0·0	0·0
12. Europeans	135	103	159	—24	0·1	0·0	0·1
British Subjects ..	*111*	*80*	*123*	*—12*	*0·0*	*0·0*	*0·1*
Others	*24*	*23*	*36*	*—12*	*0·0*	*0·0*	*0·0*
Central India Agency (including Gwalior State).							
1. Ahir	364,464	351,322	325,719	+38,745	35·9	38·2	34·8
2. Baniya	212,234	291,026	83,247	+128,987	20·9	31·6	8·9
3. Banspho (Basor) ..	56,451	55,641	52,465	+3,986	5·6	6·1	5·6
4. Brahman	869,503	715,509	986,206	—116,703	85·6	77·8	105·3
5. Chamar	929,847	823,486	859,438	+70,409	91·6	89·6	91·7
6. Dhobi	95,385	82,692	82,405	+12,980	9·4	9·0	8·8
7. Kayastha	71,018	61,525	71,392	—374	7·0	6·7	7·6
8. Kunbi	42,182	78,863	*	..	4·2	8·6	*
9. Kurmi	252,948	211,190	215,359	+37,589	24·9	23·0	23·0
10. Kumhar	161,507	137,753	145,274	+16,233	15·9	15·0	15·5
11. Lodhi	227,327	222,658	228,235	—908	22·4	24·2	24·4
12. Nai	150,322	138,564	156,395	—6,073	14·8	15·1	16·7
13. Rajput	782,018	643,521	755,819	+26,199	77·0	70·0	80·7
14. Teli	196,690	173,564	186,820	+9,870	19·4	18·9	19·9
15. Anglo-Indians ..	867	732	565	+302	0·1	0·1	0·1
16. Europeans	2,588	4,142	4,582	—1,994	0·3	0·5	0·5
British Subjects ..	*2,461*	*3,868*	*3,968*	*—1,507*	*0·2*	*0·4*	*0·4*
Others	*127*	*274*	*614*	*—487*	*0·0*	*0·0*	*0·1*
Hyderabad State.							
1. Balija	39,300	33,364	*	..	2·7	2·7	*
2. Bedar (Bendar) ..	237,774	237,741	208,096	+29,678	16·5	19·1	15·6
3. Brahman	376,468	247,126	261,241	+115,227	26·1	19·8	19·5
4. Chambhar (Madiga, Mang, Mochi).	1,281,092	1,112,577	1,222,993	+58,099	88·7	89·2	91·4
5. Kumhar (Kummara) ..	154,148	117,157	151,986	+2,162	10·7	9·4	11·4
6. Kurma	173,318	156,189	144,688	+28,630	12·0	12·5	10·8
7. Mahar (Mala, Dher) ..	1,076,539	922,023	1,137,589	—61,050	74·6	73·9	85·1
8. Telaga (Munnur, Mutrasi)	966,190	883,206	947,746	+18,444	66·9	70·8	70·9
9. Waddar	138,082	107,668	131,799	+6,283	9·6	8·6	9·9
10. Wanjari (Banjara, Lambada).	371,402	263,844	435,322	—63,920	25·7	21·2	32·5
11. Anglo-Indians ..	3,370	2,237	3,004	+366	0·2	0·2	0·2
12. Europeans	2,627	3,690	5,384	—2,757	0·2	0·3	0·4
British Subjects ..	*1,853*	*3,503*	*5,230*	*—3,377*	*0·1*	*0·3*	*0·4*
Others	*774*	*187*	*154*	*+620*	*0·0*	*0·0*	*0·0*
Jammu and Kashmir State							
1. Arain	22,922	26,370	20,621	+2,301	6·3	7·9	6·5
2. Bafinda	33,872	28,162	26,830	+7,042	9·3	8·5	8·5
3. Brahman	253,529	190,187	241,362	+12,167	69·5	57·3	76·4
4. Chamar (Chamiar) ..	41,220	39,091	39,099	+2,121	11·3	11·8	12·4

* Figures not available.

SUBSIDIARY TABLE I—*concld.*

Race, Tribe or Caste.	Population in 1931.	Population in 1921.	Population in 1911.	Net variation Increase (+) Decrease (—). 1911-31.	Number per mille of the total population of Province, State or Agency. 1931.	1921.	1911.
1	2	3	4	5	6	7	8
Jammu and Kashmir State—*concld.*							
5. Dom (Dum)	34,341	30,617	52,099	—17,758	9·4	9·2	16·5
6. Khatri	23,206	22,682	18,517	+4,689	6·4	6·8	5·9
7. Rajput	256,020	222,275	211,328	+44,692	70·2	66·9	66·9
8. Anglo-Indians ..	123	48	17	+106	0·0	0·0	0·0
9. Europeans	198	270	251	—53	0·0	0·1	0·1
British Subjects ..	*151*	*263*	*226*	*—75*	*0·0*	*0·1*	*0·1*
Others	*47*	*7*	*25*	*+22*	*0·0*	*0·0*	*0·0*
Mysore State.							
1. Banajiga	152,250	134,815	132,955	+19,295	23·2	22·5	22·9
2. Beda	301,463	271,134	268,454	+33,009	46·0	45·3	46·2
3. Brahman	245,163	215,574	194,576	+50,587	37·4	36·1	33·5
4. Ganiga	44,960	41,973	40,469	+4,491	6·9	7·0	7·0
5. Kumbara	48,657	44,289	41,810	+6,847	7·4	7·4	7·2
6. Banjara (Lambani) ..	64,368	53,300	51,168	+13,200	9·8	8·9	8·8
7. Maratha	60,528	53,034	45,898	+14,630	9·2	8·9	7·9
8. Nayinda	46,216	42,360	39,414	+6,802	7·0	7·1	6·8
9. Vakkaliga	1,312,264	1,294,801	1,336,182	—23,918	200·1	216·6	230·1
10. Vodda	164,876	152,188	142,482	+22,394	25·1	25·5	24·5
11. Anglo-Indians ..	8,309	6,778	5,827	+2,482	1·3	1·1	1·0
12. Europeans	5,411	6,901	7,463	—2,052	0·8	1·2	1·3
British Subjects ..	*4,907*	*6,636*	*7,123*	*—2,216*	*0·7*	*1·1*	*1·2*
Others	*504*	*265*	*340*	*+164*	*0·1*	*0·0*	*0·6*
Rajputana Agency.							
1. Ahir	182,165	163,311	169,129	+13,036	16·2	16·6	16·1
2. Bishnoi	69,873	52,843	52,879	+16,994	6·2	5·4	5·0
3. Brahman	854,634	772,156	959,752	—105,118	76·1	78·5	91·2
4. Chamar	767,263	696,904	734,110	+33,153	68·3	70·9	69·8
5. Charan	35,548	31,436	37,574	—2,026	3·2	3·2	3·6
6. Daroga	177,104	100,833	118,914	+58,190	15·8	10·3	11·3
7. Dhobi	43,832	40,739	45,801	—1,969	3·9	4·1	4·4
8. Kumhar	357,751	299,055	309,234	+48,517	31·9	30·4	29·4
9. Kunbi	57,815	48,522	48,202	+9,613	5·2	4·9	4·6
10. Lodha	57,560	53,329	54,726	+2,834	5·1	5·4	5·2
11. Rajput	633,830	612,587	687,292	—53,462	56·5	62·3	65·3
12. Teli	80,015	79,216	78,560	+1,455	7·1	8·1	7·5
13. Anglo-Indians ..	828	641	529	+299	0·1	0·1	0·1
14. Europeans	932	840	1,179	—247	0·1	0·1	0·1
British Subjects ..	*856*	*804*	*1,127*	*—271*	*0·1*	*0·1*	*0·1*
Others	*76*	*36*	*52*	*+24*	*0·0*	*0·0*	*0·0*
Sikkim State.							
1. Bhotia	15,192	11,580	12,414	+2,778	138·4	141·7	141·2
2. Khas	11,044	6,616	6,210	+4,834	100·6	81·0	70·6
3. Murmi	7,017	6,180	7,436	—419	63·9	75·6	84·6
4. Newar	3,811	2,516	2,937	+874	34·7	30·8	33·4
5. Anglo-Indians ..	2	..	4	—2	0·0	...	0·0
6. Europeans	8	7	14	—6	0·1	0·1	0·2
British Subjects ..	*7*	*7*	*11*	*—4*	*0·1*	*0·1*	*0·1*
Others	*1*	..	*3*	*—2*	*0·0*	..	*0·0*

SUBSIDIARY TABLE II.

Statistics of Europeans and Anglo-Indians.

Province, State or Agency.	Number of persons born in Europe, America and Australia.		Table XIX. Europeans and Allied Races in 1931.			Total Europeans and Allied Races in 1921.	Anglo-Indians.	
	1931.	1921.	British Subjects.	Others.	Total.		1931.	1921.
1	2	3	4	5	6	7	8	9
INDIA ..	**123,438**	**125,869**	**155,555**	**12,579**	**168,134**	**176,031**	**138,395**	**113,090**
Provinces	**113,793**	**113,455**	**144,474**	**10,824**	**155,298**	**159,623**	**121,898**	**96,607**
1. Ajmer-Merwara ..	1,281	1,118	1,524	152	1,676	1,442	1,232	746
2. Andaman and Nicobar Islands ..	151	144	214	..	214	209	97	25
3. Assam	2,659	1,889	3,127	235	3,362	2,768	650	491
4. Baluchistan ..	4,127	4,189	5,014	20	5,034	4,757	379	234
5. Bengal	14,092	14,107	20,904	2,126	23,030	22,730	27,573	22,250
6. Bihar and Orissa ..	3,668	3,687	5,675	714	6,389	6,346	6,638	4,134
7. Bombay* ..	17,568	22,409†	24,131	2,164	26,295	33,863†	16,218	10,543†
8. Burma	7,729	7,298	10,627	1,024	11,651	8,665	19,200	16,688
9. Central Provinces and Berar ..	4,502	4,598	5,124	526	5,650	5,892	5,065	3,574
10. Coorg	77	90	122	16	138	156	84	47
11. Delhi	3,196	2,948	4,209	97	4,306	4,370	1,010	417
12. Madras	8,088	6,399	10,676	1,701	12,377	10,836	28,694	23,492
13. North-West Frontier Province ..	10,625	9,727	11,543	33	11,576	10,473	161	200
14. Punjab (including Agency) ..	17,406	16,669	19,523	576	20,099	21,955	3,625	4,499
15. United Provinces of Agra and Oudh	18,624	18,183	22,061	1,440	23,501	25,161	11,272	9,267
States and Agencies	**9,645**	**12,414**	**11,081**	**1,755**	**12,836**	**16,408**	**16,497**	**16,483**
16. Baroda State ..	104	85	111	24	135	103	63	44
17. Central India Agency	2,057	2,903	2,360	117	2,477	3,513	736	472
18. Cochin State ..	73	50	72	40	112	66	1,717	2,182
19. Gwalior State ..	75	584	101	10	111	629	131	260
20. Hyderabad State ..	2,661	3,680	1,853	774	2,627	3,690	3,370	2,237
21. Jammu and Kashmir State	212	167	151	47	198	270	123	48
22. Mysore State ..	3,238	4,162	4,907	504	5,411	6,901	8,309	6,778
23. Rajputana Agency	469	401	856	76	932	840	828	641
24. Sikkim State ..	7	11	7	1	8	7	2	..
25. Travancore State	536	371	456	131	587	389	790	3,821
26. Western India States Agency ..	213	..	207	31	238	..	428	..

*Including Aden. †Includes figures for Western India States Agency.

SUBSIDIARY TABLE III.

Age.	Persons born in Great Britain and Northern* Ireland.		
	Persons.	Males.	Females.
1	2	3	4
Total	**100,150**	**79,442**	**20,708**
0—13	6,958	3,697	3,261
14—16	1,480	832	648
17—23	21,977	20,376	1,601
24—33	39,635	33,857	5,778
34—43	16,026	10,985	5,041
44—53	9,049	6,391	2,658
54 and over	5,007	3,286	1,721
Age Unspecified..	18	18	

*Also includes 1,101 persons (922 Males and 179 Females) who returned their birth place as Ireland without qualification.

APPENDIX I.

Exterior Castes.

N.B.—*No attempt has been made here to deal with events that have taken place since 1931.*

This term for the Hindu castes hitherto known as "depressed" was originally suggested by the Census Superintendent for Assam and has been adopted in this report as the most satisfactory alternative to the unfortunate and depressing label "depressed class". It has been criticised as being the same term as 'outcaste' only of five instead of two syllables, and it must be admitted that 'exterior' is but old 'out' writ large. At the same time it is here submitted that outcaste, with an *e*, has not unnaturally attracted to its connotation the implications of the quite differently derived outcast, with no *e*. Outcaste correctly interpreted seems to mean no more than one who is outside the caste system and is therefore not admitted to Hindu society, but since in practice the exterior castes also contained those who had been cast out from the Hindu social body for some breach of caste rules 'outcaste' and 'outcast' were in some cases synonymous and the derogatory implications of obliquity attaching to the latter term have unjustly coloured the former, a taint which is not conveyed by the substitution of the word 'exterior', which may connote exclusion but not extrusion.

The instructions of the Government of India for the taking of this census concluded with the following enjoinder :—

> "The Government of India also desire that attention should be paid to the collection of information conducive to a better knowledge of the backward and depressed classes and of the problem involved in their present and future welfare."

In that connection the following instructions were issued to the various Superintendents of Census Operations in India :—

> "For this purpose it will be necessary to have a list of castes to be included in depressed classes and all provinces are asked to frame a list applicable to the province. There are very great difficulties in framing a list of this kind and there are insuperable difficulties in framing a list of depressed classes which will be applicable to India as a whole."

A subsequent instruction ran as follows :—

> "I have explained depressed castes as castes, contact with whom entails purification on the part of high caste Hindus. It is not intended that the term should have any reference to occupation as such but to those castes which by reason of their traditional position in Hindu society are denied access to temples, for instance, or have to use separate wells or are not allowed to sit inside a school house but have to remain outside or which suffer similar social disabilities. These disabilities vary in different parts of India being much more severe in the south of India than elsewhere. At the same time the castes which belong to this class are generally known and can in most parts of India be listed for a definite area, though perhaps the lists for India as a whole will not coincide."

The question of the preparation of lists for each province was discussed at a meeting of the Superintendents of Census Operations in January 1931 before the census took place. It was agreed that each province should make a list of castes who suffered disability on account of their low social position and on account of being debarred from temples, schools or wells. No specific definition of depressed castes was framed and no more precise instructions were issued to the Superintendents of Census Operations, because it was realised that conditions varied so much from province to province and from district to district, even, within some provinces, that it would be unwise to tie down the Superintendents of Census Operations with too meticulous instructions. The general method of proceeding prescribed was that of local enquiry into what castes were held to be depressed and why and the framing of a list accordingly. It was decided that Muslims and Christians should be excluded from the term "depressed class" and that, generally speaking, hill and forest tribes, who had not become Hindu but whose religion was returned as Tribal, should also be excluded and in the numbers of the exterior castes given below these principles have been followed. A note on the depressed and backward classes in Assam submitted to the Franchise Committee by the Superintendent of Census Operations for that province affords a very clear example of the way in which these principles were intended to be applied and have been applied by Superintendents of Census Operations, and an extract from it is given towards the end of this appendix.

Both for social and political reasons it is obviously necessary to know the number of these classes not only in India as a whole but also in different provinces. The matter is of importance not only with reference to their representation in the body politic, but also with reference to any social work that is to be done towards raising them from their present backward position to one more nearly comparable with that of more advanced social groups.

The Census Commissioner in 1921 (Census of India, Volume I, part I, paragraph 193) gave what he describes as *minimum* numbers of the Depressed Classes in various provinces, making a total of 52,680,000. This figure he states, must be taken as a low estimate, since it does not include all those who should have been included, and he says, "We may confidently place the numbers of these Depressed Classes all of whom are considered impure, at something between 55 and 60 millions in India proper". Of the 52½ million for which the Census Commissioner gave actual figures, less than 43½ million were to be found in British India. This figure agrees fairly well with the 42 million odd given as the figure of Depressed Classes by the Franchise Committee of 1919. It is also not greatly at variance with the 44½ million estimated by the Nair Central Committee of 1929 as the figure of Depressed Classes in British India, but it varies very considerably from the Hartog Committee's figure of approximately 30 million. Clearly it is time that some more definite figures were obtained than the estimates hitherto employed. There are however a considerable number of difficulties in arriving at a determined figure.

The definition to be used in arriving at the figure of Depressed Classes is a very difficult matter. The following possible tests are to be considered :—

(1) Whether the caste or class in question can be served by clean Brahmans or not.

(2) Whether the caste or class in question can be served by the barbers, water-carriers, tailors, etc., who serve the caste Hindus.

(3) Whether the caste in question pollutes a high caste Hindu by contact or by proximity.

(4) Whether the caste or class in question is one from whose hands a caste Hindu can take water.

(5) Whether the caste or class in question is debarred from using public conveniences, such as, roads, ferries, wells or schools.

(6) Whether the caste or class in question is debarred from the use of Hindu temples.

(7) Whether in ordinary social intercourse a well educated member of the caste or class in question will be treated as an equal by high caste men of the same educational qualifications.

(8) Whether the caste or class in question is merely depressed on account of its own ignorance, illiteracy or poverty and but for that would be subject to no social disability.

(9) Whether it is depressed on account of the occupation followed and whether but for that occupation it would be subject to no social disability.

Now it is obvious that several of these tests themselves involve an unknown factor—What is a clean Brahman ? What is the line between a high caste and a low caste Hindu, since both adjectives may and ordinarily would have a merely comparative sense ? What constitutes pollution or what constitutes the right to use a temple, since here again there are grades from those who must remain entirely outside and not approach a temple at all to those who are admitted to the inner sanctuary ? In deciding what is an Exterior Caste, none of these tests can be taken alone. From the point of view of the State the important test is the right to use public conveniences—roads, wells and schools, and if this be taken as the primary test, religious disabilities and the social difficulties indirectly involved by them may be regarded as contributory only. Some importance must be attached to them, since obviously if the general public regards the persons of certain groups as so distasteful that concerted action is resorted to in order to keep them away, persons of those groups do suffer under a serious disability. It is not enough to say that a road is a public road, and that if A considers himself polluted by the presence of B at a distance of 30 yards and no compulsion rests on B to remove himself from the road to let A pass, the disability is A's and not B's, since A must leave the road or be polluted. That is all very well if B and his friends are in such a position as to be able to impose on A the position of being one to leave the road. If, however, it is possible for A and his friends by boycotting B and his friends for certain purposes to bring pressure on B to disregard his legal rights and to conform to A's religious prejudices and leave the road whenever A is seen at a distance, clearly B has in practice no freedom of action in the matter of the road whether his religious scruples are involved or not. This question of the use of roads has been taken as an illustration, but in point of fact the restriction of the use of roads is one which seems to be generally disappearing and has possibly disappeared to such an extent that the question may be ignored as far as British India is concerned. The use of wells, however, is another matter and the disability of the exterior castes varies from not being allowed to approach the village well at all

to the position common in Bengal in which persons of certain castes may not draw water themselves but must await someone of a clean caste who draws water for them at the well. The question of schools is another very real problem for the exterior castes, since in many parts of India if they sit inside the school they would be made to suffer in some other way by the higher castes using the school, and whereas the acquisition of reading and writing at least may be taken for granted in the case of the children of any Brahman, and of other castes as well, it is an exception in the case of the exterior castes, the presence of whose children is disliked in the school by their social superiors and whose children, if they read at all, must sit outside in the sun and dust. It is often argued that untouchability is merely dependent on the occupation, so that an untouchable person or caste abandoning an unclean occupation becomes touchable. This may be true in a literal sense, but it is not true morally, since members of exterior castes who may have abandoned their traditional calling for two or three generations are still liable to be treated as outside the pale of decent society, and their presence is apt to be regarded as an offence by members of interior castes, while they would not be ordinarily admitted to social functions on a footing of equality.

For purposes therefore of deciding what persons are to be included in the numbers of the exterior castes it has been necessary for each province to deal with the problem in its own way and to produce its own list. It is not possible to say generally that such and such a caste is exterior to Hindu society and to apply that dictum to the whole of India. It may be possible to do so in the case of certain castes, such as those of Dom and Bhangi, but it certainly is not the case that a caste which is depressed in one part of India is depressed everywhere. Consequently each provincial superintendent has had to draw up his own list, taking into account the various factors enumerated above, and to reckon as depressed only those castes or classes who definitely suffer from serious social and political handicap on account of their degraded position in the Hindu social scheme. So much is this the position that, in the Central Provinces for instance, the castes to be treated as depressed for purposes of figures in this Report have varied from district to district and no list is possible at all which is applicable to the whole of the province for all the castes concerned. Many castes and tribes who would be included by some, at any rate, of the tests mentioned above have been excluded from the list on the ground that they suffer no tangible disability as a result of their inferiority in the Hindu system. Many primitive tribes for instance are in an ambiguous position by reason of their not really being Hindus at all. Such tribes when they come within the Hindu system often become automatically depressed, largely on account of the fact that they have no prejudices against occupations and food which are taboo to interior Hindus. On the other hand, the socially superior individuals of these identical tribes are very frequently able to get themselves incorporated into the Hindu system as Rajputs or Kshattriyas, though their fellow tribesmen may remain exterior. In some cases, however, a complete tribe has succeeded in establishing its claim to a more or less equivocal twice-born status. In these circumstances, therefore, non-Hinduised hill and forest tribes have been excluded from the total of the Exterior Castes, as until they reach the stage of incorporation in regular Hindu society, they do not really suffer by their potential position in that scheme. Similarly criminal tribes have not been included unless their condition be such that even if they ceased to be criminal by habit or profession and lived as peaceable and law-abiding citizens, they would still be depressed on account of their social position as distinct from their occupational stigma. Again there are numbers of castes who, though they are regarded by interior Hindus as ceremonially polluting and such as from whose hands water cannot be taken, have in many cases such strong caste organisations and include so many individuals of substance and education that they have built up for themselves a strong position which obviates the need of any special measures for their social, political or religious protection. It is these considerations which have caused the Census Superintendent of Cochin State to exclude the Iruvans from the number of those depressed, while the Shahas, Telis and Mahishyas of Bengal and Assam would themselves protest at any such inclusion.

The note on the Depressed and Backward Classes in Assam by the Census Superintendent for that province, which forms an appendix to the Assam Census Report, affords an excellent example of the facts and considerations taken into account in determining what constitutes a depressed caste. In the case of Assam the numbers of the exterior castes are so high in comparison to the total number of interior Hindus or rather the number of interior Hindus is so comparatively small in a province in which the numbers of backward classes and hill tribes is high, that the disabilities attaching to depression are slight compared to those in most provinces, but the factors to be taken into account are the same everywhere. The non-Hindus and the hill and forest tribes included by the Assam Census Superintendent as Backward Classes have been excluded from the figures given in the table below which amount for all India to just a little over fifty million.

These figures are given province by province in this place; tables in a somewhat different form will be found towards the end of this appendix. The total number of exterior castes in British India appears in Table XVII as 39,137,405, the difference being due to the fact that in two provinces the figures in Provincial Table II on which that table is based differ slightly from the figures obtained from the caste table for individual castes.

Caste.	Population.
Aheri	87
Bagri	584
Balai	19,871
Bambhi	5,764
Bansphor	13
Bargi	75
Bhangi	6,976
Chamar	15,914
Dabgar	57
Dhanak	1,680
Garoda	48
Ghancha	90
Kalbolia	393
Kanjar	625
Khangar	2
Kuchband	69
Mahar	31
Meghwal	10
Nat	518
Pasi	49
Raigar	22,601
Rawal	113
Sansi	406
Sargara	762
Satia	71
Thori	2
Tirgar	5
Total	76,816

1. *Ajmer-Merwara.*—These figures (*76,816*) differ by 81 from the total found in Provincial Table II for the province where the total of Depressed Classes appears as 76,735. This smaller figure is due to the omission from the Provincial Table of the numbers of 80 Bagris and one Sansi, (total 81) whose religion was dubiously returned as "tribal".

Bhangi	29
Chamar	204
Kori	47
Pasi	232
Total	512

2. *Andaman Islands.*—No return was made by the Census Superintendent and these figures (*512*) have been extracted by me from his tables as representing castes unequivocally depressed.

Province—	
Bhangi	2,364
Namasudra	170,519
Jaliya Kaibartta	149,074
Tea garden coolie castes	1,233,512
Others	1,839
Surma Valley—	
Bhuinmali	38,635
Dhobi	22,521
Dugla	9,523
Jhalo and Malo	10,826
Jugi	83,922
Mahara	5,424
Muchi	7,312
Patni	51,408
Sutradhar	12,575
Brahmaputra Valley—	
Brittial Bania	14,348
Hira	16,628
Total	1,830,430

3. *Assam.*—Here it will be noticed that the list (total 1,830,430) varies in different parts of the province. Jugis, for instance, are found in both valleys, but are treated as exterior in the Surma valley and not in the Brahmaputra valley. 'Others' in the figures applicable to the whole province do not include any castes not in the list, but merely castes listed for one valley or the other but enumerated elsewhere, of which a separate tally is not now available. Of the total *1,421* are found in the Assam States, the remainder *1,829,009* being in British territory.

Chuhras	4,533
Kori	477
Pasi	228
Nat	227
Chamar (including Jaiswara)	227
Khatik	19
Shudar	7
Ramdasi	3
Ghasia	1
Total	5,722

4. *Baluchistan.*—Of this total of 5,722, only *20* are found in Baluchistan States, remainder (*5,702*), being in British territory. In addition to the castes in the above list the following castes appear in the Baluchistan list, figures of which have not been accepted by me, as the exterior position of several of them is at least open to dispute, and it appeared to me that the local net had been cast too wide and I therefore rejected for the India list the following castes which appeared to me to be doubtfully exterior:—

Dhobi	749
Mochi	388
Nai	125
Kurmi	109
Kabirpanthi	56
Kumhar	71
Gadaria	46
Julaha	31
Kohli	28
Teli	21
Total	1,624

Caste.	Population.
Bhuinmali	72,804
Dom	140,067
Halalkhor	876
Hari	132,393
Kaora	107,908
Kichak	2
Lalbegi	4,965
Mehtor	23,278
Bagdi	987,570
Bahelia	4,449
Bauri	331,238
Bhuiya	49,370
Bind	19,518
Binjhia	317
Chamar	150,458
Dhenuar	44
Dhobi	229,672
Doai	1,960
Dosadh	36,420
Ghasi	5,312
Kadar	1,078
Kan	66
Kanwar	133
Kotal	7,651
Lohar	50,167
Mal	111,167
Mallah	26,252
Muchi	414,219
Musahar	11,714
Naiya	40
Namasudra	2,094,957
Palaiya	43,160
Pan	1,855
Pasi	18,925
Patni	40,766
Pod	667,731
Pundari	31,255
Rajwar	21,337
Sunri	76,920
Tiyar	96,413
Turi	16,199
Baiti	8,888
Bediya	7,243
Beldar	3,139
Berua	367
Bhatiya	322
Damai	6,039
Gonrhi	5,149
Jalia Kaibartta	352,072
Jhalo, Malo	198,099
Kalwar	13,531
Kandra	4,724
Kapali	165,583
Kapuria	170
Karenga	9,855
Khatik	1,157
Konai	41,058
Mahar	1,986
Nagar	16,164
Nat	7,348
Raju	56,778
Shagirdapesha	333
Total	6,930,631

5. *Bengal.*— Of this total of 6,930,631, *30,822* are found in the Bengal States, leaving *6,899,809* in British districts. Here again a number of names have been added by the Local Government, some of which are also regarded as Exterior by the Census Superintendent. Most of these are primitive tribes whose names I have rejected for that reason. These tribes are marked with an asterisk, and it must, of course, be borne in mind that many of them are actually in the process of being transformed into exterior castes of Hinduism, if they have not already become so. Of the others not so marked some are admittedly doubtful and their inclusion as exterior castes might be justified; others on the contrary appear to me to be such that their inclusion would be entirely unjustified, *e.g.*, Khandait, while Suklis have definitely protested against their inclusion, and the attitude of the Rajbansis has been equivocal. It is understood that the Local Government are also including Kurmis in their list of Depressed Classes, but I do not myself regard this as even a doubtful case. They will not be found in this list. The additional names in the Local Government's list are—

*Agaria	230
*Asur	..
*Bhumij	84,447
*Birhor	..
*Garo	37,909
*Hadi	14,334
*Hajang	19,693
*Ho	23
*Kandh	1,525
Kastha	2,601
*Kaur	1,781
*Khaira	38,287
Khandait	35,080
*Kochh	81,299
*Koda (Kora)	46,789
Koiri	16,021
*Korwa	..
Lodha	11,001
*Mahli	16,262
*Malpaharia	11,782
*Mech	4,875
*Munda	63,107
*Nageshia	2,088
Nuniya	28,100
*Oraon	136,427
*Rabha	2,076
Rajbangshi	1,806,390
*Santal	433,502
Sukli	3,860
Tipara	195,855

Caste.	Population.
Bauri	314,979
Bhogta	66,054
Bhuiya	621,062
Bhumij	266,464
Chamar	1,296,001
Chaupal	2,737
Dhobi	414,221
Dom	269,340
Dosadh	1,290,936
Ghasi	75,579
Ghusuria	1,846
Godra	1,553
Gokha	48,622
Halalkhor	20,742
Hari	115,613
Irika	332
Kandra	155,113
Kanjar	2,566
Kela	9,493
Kurariar	631
Lalbegi	105
Mahuria	2,389
Mangan	184
Mochi	22,863
Musahar	720,051
Nat	9,628
Pan	411,770
Pasi	172,061
Siyal	9,281
Turi	54,041
Total	6,376,257

6. *Bihar and Orissa.*—This total (6,376,257) excludes the figures of Rajwar (133,935) which have been included by the Census Superintendent who gives the total number of his depressed classes as 6,510,192. The figure that appears however in his provincial table II is 6,409,337 of which 649,266 appear in the states, the remainder, that is 5,760,071, being in British territory, a figure little higher than that reached by me after excluding Rajwars, and differing from his report total on account of some omissions in the provincial table. The case of the Rajwars in Bihar seems to me to be open to doubt and they do not appear in the United Provinces' list. In my opinion the Franchise Committee was not justified in excluding from the depressed castes Bauri, Bhogta, Bhuiya, Bhumij, Ghasi, Pan and Turi. With the possible exception of Bhumij and Bhuiya these seven cannot be regarded as retaining much, if any, tribal cohesion, and they are outwardly Hinduised. Of the total 6,376,257 in my list not more than *631,864* are found in the Bihar and Orissa States, leaving not less than *5,744,393* in British districts.

Caste.	Population.
Agar	6,680
Bhambi	8,729
Bhangi, etc.	79,403
Chambhar	291,811
Dhor	18,277
Khalpa	11,485
Kolcha (Kolgha)	1,114
Koli-Dhor	15,923
Kotwalia	1,418
Mahar	1,264,104
Mang	309,938
Mang-Garudi	4,334
Meghwal	69,797
Timali	68
Turi	1,053
Vitholia	526
Wansfoda	664
Others	13,674
Total	2,098,998

7. *Bombay.*—Of this total of 2,098,998, *348,574* are found in the Bombay States, the remaining *1,750,424* being in British territory.

Caste.	Population.
*Audhelia	749
Basor	53,204
*Balahi	33,776
*Bedar	490
*Bahna	6
Chamar	528,039
*Chadar	21,071
*Chauhan	2,026
Dom	4,660
*Dhobi	73,966
*Dhimar	46,071
*Dohor	6,616
*Dewar	1,786
*Dahayat	833
*Dhanuk	3
Ganda	108,843
*Ghasia	45,409
*Holiya	3,439
*Jangam	12
*Kori	30,477
*Katia	24,510
*Kumhar	23,863
*Khatik	11,327
*Khangar	7,650
*Kaikari	2,157
Mahar, Mehra	1,255,703
Mang	101,142
Mehtar, Bhangi	30,950
Mochi	6,179
*Madgi	10,070
Carried over	2,435,027

8. *Central Provinces and Berar.*—Of this total of 3,071,078, not more than *252,732* appear in the states, not less than the remaining *2,818,346* being in British territory. It will be noticed that an asterisk appears against a large number of castes in the marginal list, and only those castes have been treated as exterior throughout the province against which no asterisk appears. Wherever a caste is asterisked the implication is that in some parts of the province it is treated as Exterior and in other parts it is treated as Interior. Details of this distribution may be obtained from the provincial tables if required. The numbers shown against each caste refer, of course, to the numbers actually treated as exterior and not to the number of the castes found in the province. The Census Superintendent gives the figure of 3,180,075 as the total of the depressed classes in the Central Provinces and Berar, both in Chapter XII of his report and in Provincial Table II and in Appendix II to his

Caste.	Population.
Brought forward ..	2,435,027
*Mala	1,048
*Nagarchi	5,970
*Ojha	1,718
*Pardhi	41
*Pardhan	71,906
*Panka	204,304
*Rajjhar	1,217
Satnami	349,847
Total ..	3,071,078

8. *Central Provinces and Berar*—contd.

report. In the latter place the total given for British Districts is misprinted as 2,927,936 instead of 2,927,343. As these figures include those returning tribal religions, I have taken as the total of the depressed castes the sum of those returned as Hindu by religion, the figures of which appear here.

Caste.	Population.
Adi-Dravida	52
Adiya	5
Balagai	130
Holeya	320
Kalloda	2
Korama	128
Kudiya	549
Lippara	4
Madiga	217
Maleya	123
Medara	41
Muchi	20
Mundala	87
Nale Kanavaru	9
Pale	3,192
Panchama	19,571
Pannikar	5
Paraiyan	340
Samagara	5
Surava	3
Total ..	24,803

9. *Coorg.*—Of the total (*24,803*) of these castes Kudiya appears also as a primitive tribe and there is therefore an overlap of 549 between exterior castes and primitive tribes in Coorg, or of 1,089 if the Marratha (540) be included in the former category ; for the purposes of these figures it has been omitted.

Caste.	Population.
Bawaria	32
Chamar	42,952
Chuhra	17,901
Dagi and Koli	6,928
Dhanak	1,321
Khatik	3,522
Sansi	227
Total ..	72,883

10. *Delhi.*—This total (*72,883*) agrees with that given in Provincial Table II.

Caste.	Population.
Adi-Andhra	664,844
Adi-Dravida	1,619,227
Adi-Karnataka	644
Ajila	659
†Aranadan	60
Arunthuthiyar	17,396
Baira	1,879
Bakuda	806
Bandi	553
Bariki	3,695
Battada	558
Bavuri	42,810
Bellara	87
Byagari	8,459
Chachati	5,130
Chakkiliyan	606,775
Chalavadi	3,422
Chamar	140
Chandala	2,113
Cheruman	214,878
Dandasi	44,248
Devendrakulathan	4,019
†Dombo	79,643
Ghasi	6,081
Godagali	969
Godari	419
Godda	146
Gosangi	244
Haddi	17,433
Hasla	368
Holeya	49,567
Jaggali	3,020
Jambuvulu	6,701
†Kadan	491
Kalladi	5,737
Kanakkan	22,046
†Karimpalan	2,807
†Kattunayakan	1,581
Kodalo	28,410
Koosa	818
Koraga	4,042
†Kudiya	3,497
Carried over ..	3,476,422

11. *Madras.*—This total (7,299,400) is taken from the Madras Caste Table for 1931, *65,296* being found in the Madras States other than Cochin and Travancore, *i.e.*, in Pudukkottai, Banganapalle and Sandur ; the remaining *7,234,104* are found in British territory. The total differs from that given in Madras Provincial Table II by a figure of 34,053. This represents the numbers of the Marathi or Marratha tribe, a caste or tribe found in South Kanara (its name has nothing to do with 'Maratha' as ordinarily understood) and described by the Census Superintendent and the district officer as a primitive tribe, but listed by the Madras Government as a depressed caste. In southern India, *i.e.*, in India south of the Godavari, little difference is to be distinguished as a rule in the treatment of primitive tribes and of exterior castes ; both alike are regarded as untouchables or pollute at a distance, though the same does not apply to all the tribes in the Agency tract which is to the north of the Godavari. This Marratha tribe however should probably be excluded from the list of depressed castes proper, and I have therefore excluded it in this list, following the caste table and not Provincial Table II, the numbers of which include this tribe. Several other tribes appear in the Madras table both as primitive tribes and as depressed castes. They have been included by the Madras Census Superintendent both in his Caste Table and in Provincial Table II, and their names will be found in the above list marked with a dagger. The total numbers of these tribes involve an overlap between the

Caste.	Population.
Brought forward ..	3,476,422
†Kudubi	12,011
Kudumban	827
Kuravan	2,110
†Kurichchan	7,112
†Kuruman	10,447
Madari	6,617
Madiga	612,411
Maila	1,431
Mala	837,718
Mala Dasu	2,399
†Malasar	5,101
Matangi	623
†Mavillan	1,341
Moger	773
Muchi	1,842
Mundala	6,250
Nalakeyava	1,489
Nayadi	520
Pagadai	771
Paidi	39,437
Painda	92
Paky	2,017
Pallan	825,224
Pambada	335
Pamidi	424
Panchama	75,574
Paniyan	32,410
Panniandi	54
†Pano	70,527
Paraiyan	1,117,197
Paravan	826
Pulayan	23,378
Puthirai Vannan	74
Raneyar	1,480
Relli	24,239
Samagara	2,018
Samban	557
Sapari	462
Semman	1,198
Thoti	1,639
Tiruvalluvar	207
Valluvan	59,202
Valmiki	4,239
Vettuvan	28,325
Total ..	7,299,400

11. *Madras.*—contd.

primitive tribes and exterior castes of 194,618 or of 228,671 if the Marratha (34,053) be included. The Marrathas have however been excluded from my figures, though treated as 'Depressed' by the Government of Madras.

Caste.	Population.
Chuhra	5,783
Chamar	227
Total ..	6,010

12. *North-West Frontier Province.*—This figure (6,010) exceeds the figure *5,468* appearing in the North-West Frontier Provincial Table II by *542*. The explanation is that this figure 542 refers to exterior castes enumerated in trans-frontier posts which were therefore outside the scope of Provincial Table II, and the correct figure is the one given here.

Caste.	Population.
1. Bawaria	16,120
2. Chamar	941,312
3. Chuhra	454,772
4. Dagi and Koli	181,472
5. Dumna	37,205
6. Megh	22,363
7. Sansi	31,165
8. Sarera	7,083
9. Others (Ad-Dharmi) ..	75,313
Total ..	1,766,805

13. *Punjab.*—The total figure here arrived at (1,766,805) differs by 82,576 from the figure which is given by the Census Superintendent for the Punjab in his Provincial Table II; this latter figure is 1,684,229, but it does not include all the depressed castes, as Bawaria, Dumna, Megh and Sarera are omitted in Provincial Table II. In Appendix I to Chapter XI the Census Superintendent gives his total figure of depressed castes as 1,798,623, which exceeds the total accepted by me for the India figures by 31,818. Of the castes given in my list above *94,347* are found in the Punjab States, *392,999* are found in the Punjab States Agency, and the remainder, *1,279,459*, are in the British districts. These figures include all those who returned their religion as Ad-Dharmi the total number of whom is 399,307 in British districts and 19,482 in the States and the Agency together. I have taken for India the figures of the eight castes in the above list and such others who returned themselves as Ad-Dharmi. The Census Superintendent for the Punjab, however, names sixteen castes as "Depressed and Backward". Excluding the 8 castes etc., given by me the other castes named by him include :—

Bagaria	2,282
Dhobi	12,543
Ghosi	1,904
Julaha	53,488
Kahar	62,422
Mahtam	15,482
Od	19,583
Ramdasia	12,235
Total	179,939*

The last two of these castes are regarded by him as quite definitely depressed.

* Total Punjab—includes the States approximately 4,800 and the Agency approximately 32,500.

Caste.	Population.
Agariya Bhuiya Bhuiyar Chero.. Ghasiya Khairaha Kharwar (excluding Banbasi) Majhwar (Manjhi) Panka Parahiya Patari	68,044
Kol ..	76,845
Korwa	467
Barmanu Bayar Dhangar Musahar	78,770
Saun ..	2,275
Silpkar	313,737
Balahar Bansphor Dharkar Basor.. Dom .. Domar	109,906
Aheriya	23,084
Bahelia	45,458
Bandi Kabaria	513
Khatik Chik ..	209,668
Pasi (includes Yarmali) ..	1,459,940
Balai	136
Bhar (excluding Rajbhar)	461,624
Bhil ..	28
Dhari.. Kingharia Pawaria	7,599
Dusadh	73,522
Beriya Bangali Bhantu	12,105
Karwal or Karaul	108
Habura	1,915
Kanjar (including Sapera and Saparia).	23,311
Sansia	886
Badi .. Bajania Bajgi Gual.. Kalabaz	34
Nat ..	37,038
Badhik	1,367
Barwar	4,314
Bawariya (Bauria)	15,956
Sahariya	14,113
Sanaurhiya	31
Gidhiya	191
Bhangi	482,718
Chamar	6,292,338
Dabgar Gharmi	657
Dhobi	665,905
Kori ..	922,357
Mochi	5,752
Arakh	85,907
Kaparia	803
Khairwa	81
Kotwar	64
Tharu	31,578
Total	11,531,145

14. *United Provinces.*—Of this total figure of 11,531,145, *208,864* are found in the States and the remaining *11,322,281* in British districts. In addition to the above the Census Superintendent for the United Provinces includes the following castes (1,288,804) in his list. There is some doubt about the correct classification of the castes in this second list and I have excluded them from my figures :—

Beldar	44,206
Kharot	356
Kumhar	772,945
Luniya	471,297
Total	1,288,804

The castes accepted by me include a number of quasi-aboriginal tribes. In the case of the United Provinces I consider them correctly classified as exterior castes, as with the possible exception of some 200 Korwas they are reported to be completely detribalized and their social position is indistinguishable from that of other depressed castes included.

States.—The total figure for depressed castes in States and Agencies appears in Table XVII as *11,112,942*. This figure includes the figures already mentioned of depressed castes found in the states in political relation with the various provinces. The States and Agencies forming census units are dealt with separately below :—

Caste.	Population.
Bhangi	31,018
Bansphor	478
Chamar (including Khalpa)	42,802
Garoda	7,796
Holar	54
Mahar	572
Mang	37
Nadia	622
Shenva	9,643
Thori	56
Turi	1,711
Vankar including Dhed	107,988
Others (Arya)	266
Total	203,043

15. *Baroda.*—The marginal list of depressed castes, total *203,043*, agrees with the figures given by the Baroda Census Superintendent as depressed in his Appendix IX to his Chapter XII.

Caste.	Population.
Balai	191,194
Basor	43,399
Bhambi	6,560
Bhangi	28,429
Chamar	513,897
Dharkar	4,850
Dher	51
Dom	51
Domar	442
Jhamral	1,519
Mahar	4,885
Mang	1,252
Meghwal	1,373
Total	797,902

16. *Central India Agency.*—The total given above, *797,902*, exceeds the total appearing in the Agency Provincial Table II by 58, the reason being that it includes 58 Chamars whose religion was returned as 'Tribal' and who, therefore, appeared in a different column in the Provincial Table. Except in this case and in that of Ajmer-Merwara, in both of which the correctness of the return seems open to considerable doubt, individuals returning a tribal religion have been rigidly excluded from my figures.

Caste.	Population.
Bagri	23,209
Balai	97,828
Barar	1,384
Bargunda	1,931
Basor	13,052
Beria	5,807
Bhangi	27,405
Chamar	415,950
Kanjar	402
Khatik	15,800
Koli	75,351
Total	678,119

17. *Gwalior.*—No return of depressed castes was made in State Table II, and the figures here are taken from Chapter XII of the Gwalior Report

Caste.	Population.
Dher (including Mala, Mahar)	1,076,539
Madiga (including Mang)	1,281,092
Others	115,599
Total	2,473,230

18. *Hyderabad.*—The total in this State is *2,473,230*. 'Others' in this list include a number of minor exterior castes, *e.g.* Bhangi, for which separate totals are not given in the State Tables.

Caste.	Population.
Barwala	5,682
Basith	6,213
Batwal	5,645
Chamar	41,189
Chuhra	1,607
Dhiyar	3,165
Dom	34,329
Gardi	173
Jolaha	40
Megh	70,030
Ratal	488
Saryara	2,354
Watal	13
Total	170,928

19. *Jammu and Kashmir.*—The castes in the above list (total *170,928*) are those reported as exterior by the Census Commissioner for the State, and the numbers are those that appear against the castes named in the State Caste Table. They agree with the numbers of depressed classes given in the State Table II.

Caste.	Population.
Eravalan	541
Irulan	240
Kadan	267
Kanakkan	13,192
Kavera	790
Kootan	228
Malayan	3,185
Nayadi	152
Pulayan	82,043
Sambavan (including Paraiyan)	11,914
Ullatan	778
Valluvan	212
Vettuvan	11,797
Total	125,339

20. *Cochin.*—Here the numbers given (*125,339*) are those of the castes described as exterior by the Census Superintendent for the State. His State Table II gives the total of depressed classes as 126,652 exceeding the total given here by 1,313. This total refers to the Vadukan caste, and its classification as depressed is erroneous; it was included in the provincial table accidentally and I have therefore omitted it.

Caste.	Population.
Adi-Dravida	966
Alavan	734
Ampattan	305
Arayan	23,380
Bavuri	164
Bharathar	275
Chackaravar	3,536
Chakkiliyan	6,188
Chavalakkaran	1,730
Chayakkaran	2,168
Ilavan	869,863
Ilavathi	6,955
Kaikolan	455
Kakkalan	1,666
Kaniyan	15,652
Kathikkaran	161
Kavathi	2,293
Keralamuthali	1,423
Kuravan	87,071
Marakkan	353
Maravan	14,399
Medara	363
Mukkuvan	596
Nadar	233,982
Nayadi	144
Nulayan	3,129
Pallan	29,880
Panan	3,812
Panikkan	397
Paravan	13,602
Paraiyan	70,684
Pulayan	207,337
Pulluvan	527
Thantan	41,214
Thantapulayan	795
Thontaman	684
Valan	21,172
Vannan	13,433
Varnavar	166
Velakkithalanayar	30,603
Velan	16,253
Veluthadanayar	14,878
Vetan	9,496
Vettakkaran	498
Yadavan	8,457
Minor and Unspecified	7,896
Total	1,769,735

21. *Travancore.*—The Census Commissioner for Travancore State gives a list of castes regarded as depressed in that State, the number of which is extracted from his Caste Table and added up amounts to *1,769,735* but the number that appears in his State Table II is 1,787,380. I have therefore accepted for India figure the smaller total obtained from his caste table. The larger total in State Table II includes the hill tribes, probably with justice.

22. *Mysore.*—The real exterior castes of Mysore State are the Holeyas and Madigas, numbering between them *1,000,326*, who have been jointly returned at at this census as *Adikarnatakas*.

Caste.	Population.
Holeya, Madiga	1,000,326
Total	1,000,326

In addition the Mysore Government treats as depressed the following four castes :—

Banjara	50,709
Koracha	10,238
Korama	13,607
Vodda	164,876

which accounts for the total appearing in the Mysore State Table II of 1,239,856. It seems clear that at any rate the Banjara and Vodda are not strictly exterior castes and the case of the other two, apparently two names for the same caste, is doubtful; they are more criminal than depressed. For the purposes of Indian figures therefore the total of 1,000,326 is taken for Mysore.

Caste.	Population.
Aheri	1 204
Bagri	10,397
Balai	218,857
Bambhi	162,863
Bansphor	926
Bargi	1,593
Bazigar	372
Bhangi	92,747
Bidakia	63
Chamar	766,643
Dabgar	652
Dhanak	30,733
Dhed	19,907
Garoda	8,699
Ghancha	4,772
Kalbelia	3,740
Kanjar	3,553
Khangar	2,925
Koria	11,303
Kuchband	326

23. *Rajputana.*—The total of these castes (*1,565,409*), reported as depressed by the Census Superintendent and compiled from figures extracted from his Caste Table, agrees with his total in Provincial Table II.

Caste.	Population.
Brought forward ..	1,342,275
Mahar	5,362
Meghwal	23,273
Nat	6,416
Pasi	43
Raigar	130,103
Rawal	677
Sansi	6,719
Sarbhangi	23
Sargara	31,300
Satia	1,113
Thori	17,397
Tirgar	708
Total ..	1,565,409

23. *Rajputana*—contd.

Lalbegi	23
Mehtar	3
Muchi	19
Sunri	2
Bhuiya	3
Damai	1,866
Dhobi	6
Kalwar	96
Lohar	11
Total ..	2,029

24. *Sikkim.*—The figures (*2,029*) are extracted from the Bengal and Sikkim Caste Table and represent the castes returned as depressed by the Census Superintendent. No State Table is published.

Ager	428
Bhambi	1
Bhangi (including Halalkhor) ..	33,422
Chamar	47,728
Garoda	5,594
Koli Dhor	10,435
Kotwalia	51
Mahar	174,446
Meghwal	43,909
Turi	2,206
Total ..	318,220

25. *Western India States Agency.*—The figures (*318,220*) agree with those in Provincial Table II and include all castes returned by the Census Superintendent as depressed.

GRAND TOTAL	India	*50,195,770*
	Provinces ..	*41,091,490*
	States	*9,104,280*

N.B.—The total here given for provinces includes that of the states attached to them. For separate figures see Table B below. The totals do not precisely correspond to those given in Table XVII of Part II, as the latter figures are taken from the Provincial Table II in the cases of Bihar and Orissa and of the Central Provinces and Berar, in both of which the details do not tally precisely with those given for the whole province.

These then being the numbers of the depressed classes in India some estimate is necessary of their position at the present time, and it has already been pointed out that their disabilities can be roughly divided into two categories. Firstly, that under which they are barred from public utilities, such as, the use of roads and tanks, and secondly, their religious disabilities which debar them from the use of temples, burning grounds, *mats* and some other institutions. In addition to the above, but arising out of the second of these, there are the disabilities involved in relation with private individuals, such as the services of barbers and the admission to tea-shops, hotels or theatres owned by private individuals. A resolution of the Anti-Untouchability Conference of 1929 in Madras regretted "to note that in Restaurants, Coffee Hotels, Hair Dressing Saloons, Water Pandals, etc., notices are hung prominently excluding the untouchables", and the Census Superintendent for the Central Provinces writes "The fact that a sweeper may sit beside a high-class Hindu in a railway carriage or a motor-lorry without any question of his right to do so has not yet made it any more easy in the interior for a touring officer to persuade cartmen of some castes to carry his sweeper from camp to camp. In fact in certain districts it is always essential to employ at least one cartman of humble caste for this purpose".

Theoretically perhaps the admission to Hindu temples would be enough, once it is conceded, to remove all the other disabilities, for the temple is not merely a religious institution but is also in many ways a social one, for the term must be taken to include such buildings as *namgarhs* which, as temples do in some parts of India, serve as a village hall or a town hall for the public generally. A temple also contains a school, so that the absence of the right of entering the temple may debar an individual from the possibility of attending the school. In some Hindu temples, such as the Parbati Temple in Poona, the Kalarama Temple at Nasik, the Hajo Temple in Assam, it has been in the past the practice to admit non-Hindus, such as Christians and Muslims to a point to which the untouchable Hindus were never admitted at all. It is however not quite certain how far under present conditions the actual right of admission to a temple would, if conceded, remove the social disabilities of the depressed castes since it

might have the effect of merely driving the higher castes to shun the temples to which the untouchables were admitted. In any case the right varies much in different places. An Iruva or a Thiyya in Malabar must stay 325 feet from the curtain wall of the temple of Guruvayur, for instance, and this wall is 350 feet square with the temple in the centre. Yet the Iruva have not been treated, in Cochin State at any rate, as a depressed caste at all, since though deprived there likewise of temple entry they are otherwise well-to-do and not ill educated.

As regards the civil rather than the religious disabilities to which the depressed classes are at present subjected, the first one mentioned above is the right to use the public roads; up to how recently the use of public roads has been debarred in certain cases may be gathered from the fact that the untouchables of Travancore made an organised attempt in 1924 to obtain the use of roads which skirted the temple at Vaikom. These roads were public roads, maintained by the State for the use of everybody, but on account of their proximity to the temple building, the untouchables were not allowed to use certain sections which skirted the temple too closely. Ultimately, as a result of satyagraha, the temple compound was enlarged and the ban on the roads was removed, the roads having been realigned so that their users were no longer within the polluting distance of the temple. In 1926 and again in 1930, a similar case occurred in Travancore in connection with Sachindram Temple which is one of the richest in the State. Here again the depressed classes wanted the right to use a road maintained by public funds and belonging to the State. In the matter of the use of roads generally, however, the depressed castes are no longer in the position in which some of them were when the Mangalore District Gazetteer was written, when the Ande Koragas had to carry a spittoon round their necks as being so highly polluting that they could not be allowed to expectorate on the public road, though it has recently been reported that a caste has been found in the Tamilnad, the very sight of which is polluting, so that its unfortunate members are compelled to follow nocturnal habits, leaving their dens after dark and scuttling home at the false dawn like the badger, hyaena or aard-vark. *The Hindu* of December 24th, 1932, writes of them as follows :—" In this (Tinnevelly) district there is a class of unseeables called Purada Vannans. They are not allowed to come out during day time because their sight is considered to be pollution." Some of these people, who wash the clothes of other exterior castes, working between midnight and daybreak, were with difficulty persuaded to leave their houses to interview Mr. A. V. Thakkar, who described them as coming only after repeated persuasion and then with " their whole bodies shaking and trembling".

The case of wells has already been alluded to, and is a far more widespread and real grievance than any which may still survive in regard to the use of roads. Generally speaking, if the exterior castes have succeeded in asserting their right to use public wells, the higher castes have given them up. Here again the difficulty about the use of wells will be found to be most prevalent in the drier parts of India where water is scarce. In Assam this difficulty is not worth mentioning and in Bengal where it exists, it is usually got over by water being drawn for the exterior castes by some interior caste Hindu. This arrangement is obviously open to certain drawbacks but it is not so serious as the custom in many parts of upper India and southern India which prohibits the exterior castes from having water at all from the well which is used by interior Hindus. The same applies to the use of dharamshalas and of public burning ghats and the burial grounds in regard to all of which the position of the exterior castes is much the same as it is in regard to the use of wells.

With regard to schools, the Director of Public Instruction for Bombay reporting for the year 1928-29, remarks that admission to schools was not refused to the children of the depressed classes in the schools under the control of any local body except the District Local Board at Ratnagiri, some schools of the District Local Board of the Nasik District and in the Ahmadabad and Surat districts. In the latter districts the students generally used to sit in temples, dharamshalas or private houses and the pupils of the depressed classes were objected to, but the objection was withdrawn on being warned that such schools would loose any grants that they enjoyed from the Government. How far this withdrawal of objection was effective is doubtful, since at any rate in one case the depressed classes at Surat had to withdraw their children from the school as a result of the indirect pressure exerted on them by higher castes. Similarly in some cases the depressed caste pupils find it better to sit outside the school, as if they sit inside they are boycotted and compelled to leave the school. Thus at Kaira in April 1931 some Dheds took their seats with other Hindu boys in the municipal school. Kaira had been one of the centres of Mr. Gandhi's activities and no objection was raised on that day, but when the parents of the interior caste boys heard of it they threatened a boycott of the school and of the teacher if the Dhed boys were allowed to sit with theirs, or even to occupy the same class room, with the result that the next day the Dheds were refused admission to the school premises. On the other hand in Sind and in the central and southern divisions of Bombay it was reported that there were no primary schools managed by the local authorities which refused admission to the depressed castes' children. Similarly in Assam no inconvenience appears to have been experienced by the exterior castes in the matter of school attendance. On the other hand in many parts of India the inconvenience is greater than it is in Bombay. Very few of the exterior castes attend schools nominally accessible to them in

Negapatam, Kumbakonam, Tinnevelly, Cocanada, Bezwada and Narsapur and other towns in southern India, though in Madras, Madura, Sivaganga and some other towns a number of exterior castes' children attend schools which are not especially reserved for them and which are not boycotted by the higher castes. In most parts of southern India it is necessary to have special schools for the exterior castes, since it is not yet possible to induce the higher castes to learn in their company. In July 1931, when it was decided to admit exterior castes into all the aided schools, a number of schools had to close and from some other schools the higher caste children were withdrawn. Similarly in Baroda State the abolition of separate schools in November 1931, is reported to have given great resentment to the caste Hindus who in some cases withdrew their children from schools and in others destroyed the crops of the exterior castes or poured kerosene oil into the wells used by them. In Bengal the Rural Primary Education Bill passed in 1930, appears to have been opposed by members representing the caste Hindus, and it is alleged that this opposition was aimed at depriving the non-caste Hindus and also the poorer Muslims from the benefits of literacy. In Cochin State on the other hand much has been done to open all educational institutions to the exterior castes, though this has involved in some cases the removal of the school to another site, while cases have occurred of some ill-treatment of the castes now admitted to the schools. Generally speaking, however, during the last decade the exterior castes at school in Cochin have increased in number from some 1,500 to some 14,000 and out of 700 recognised schools only 3 are still reserved to the higher castes, and a Protector of the backward and depressed classes has recently been appointed. Cochin, however, is probably in many ways exceptional.

In regard to the matter of the right to enter Hindu temples, the exterior castes were advised by Mr. Gandhi not to attempt to gain entry by his own method of satyagraha as God resided in their breasts. A temple, however, as has been pointed out, is more than a purely religious institution and the right of temple entry is by some regarded as the key position with regard to the removal of untouchability. The claim to enter temples is not opposed only by high-caste Hindus; even *Justice*, the organ of the anti-Brahman Party, writes as follows:—

> "For many centuries these peoples, most of whom until recently were Animists, were content to worship at their own shrines, and to try to force themselves into Hindu temples is not.....to make themselves popular. Nor can we think that any grave wrong is done by their continued exclusion ..... they would be better occupied in improving their own condition than in a violent attempt to assert rights which no one had heard of till a few years ago."

There is on the other hand a definite movement among many more advanced Hindus to remove the ban on the temple entry, a movement which has since the census been given much impetus by Mr. Gandhi's fast and the negotiations following it for the admission of untouchables to Hindu temples generally, and it may be mentioned as an instance of this that 8 temples of a Telugu community in Bombay were reported to have been opened to untouchables in February 1930. On the other hand recent cases of attempts to obtain entry by depressed castes have led to violence. Some 2,000 untouchables collected outside the Kala Ram temple at Nasik on March 3rd, 1930, and a meeting which attempted to bring about a settlement was stoned by the orthodox. Ultimately some 150,000 Mahars and Chamars were reported to have collected at Nasik and the temple had to be closed for about a month to keep them from entering it. The admission of caste Hindus by a private passage ended in violence in which the orthodox were the aggressors, and which was extended to Mahar villages in the neighbourhood where the depressed castes were violently attacked by caste Hindus, their wells polluted and in some cases their houses burned. A similar attempt to force an entrance a year later had similar results, and in December 1931 the same sort of situation arose on an attempt of the depressed castes to bathe in the Ramakund, the sacred pool at Nasik, and again in April over the dragging of the *rath*. Similarly at Singanallur in south India the question of entry to a temple led to a free fight in 1930, and at some other places also. In Nagpur a temple was voluntarily opened to untouchables and in the Dacca Division in Bengal a *satyagraha* of 9 months duration ended in the temple doors being forced open by a band of high caste women who sympathised with the *satyagrahis*. This was in May, but it was reported in October that the temple was deserted by high caste Hindus. One wonders therefore how far the higher castes are likely to make use of a pan-Hindu temple recently endowed at Ratnagiri with a view to providing a common place of worship for all castes.

The prohibition against exterior castes entering the Hindu temples naturally raises the question whether they can really be called Hindu at all. Generally speaking, the answer must be that they are definitely Hindus; they worship the same deities and, though refused entry to the temples, boxes are placed outside, at the limits to which they can approach, to receive their offerings. The degree of Hinduism does, however, vary considerably; thus the Mahars and Chamars in general are very decidedly Hindu, whereas the Chuhra of the Punjab is very doubtfully so, taking a Hindu tone when living by a Hindu village, a Muslim tone in a Muslim village and that of a Sikh in a Sikh village; perhaps the Chuhra should really be described as tribal by religion, and the possibly connected Chodhra of the Bombay Presidency is definitely regarded as a forest tribe rather than a caste. In any case, in the Punjab the question has been

partly solved at this census by the Chuhra returning himself as an *Ad-Dharmi*, that is to say a follower of the original religion. For him it means the customs immemorially observed by his caste or tribe, but of course the term might mean very different things to different peoples. In the Punjab its use as distinct from Hindu (in other provinces the exterior castes have frequently returned themselves as *Adi-Hindu*, *Adi-Dravida*, etc., with a similar implication to that of *Ad-Dharmi*) is probably a political expedient in order to obtain more effective representation on the provincial legislative body, and in spite of the occasional use of the word 'Hindu' with reference to caste Hindus and excluding the exterior castes it must be held that these castes generally are Hindu by religion even if they are not Hindu socially, hence the expression "exterior caste" is suitably applied to castes who follow the Hindu religion but are not admitted to Hindu society.

This social bar tends to foster conversion to the Sikh faith, to Islam, or to Christianity, though even after conversion the social stigma does not vanish at once. This is hardly to be expected. The Mazhbi Sikhs are looked down upon by the Sikhs who are not Mazhbi. The Southern Indian Christians distinguish between the castes of their converts in their seating accommodation in churches, and the dislike of the exterior castes does not immediately disappear when they turn Muslim. At the same time once they are converted it does not take them very long before they can rise in the social scale, and in the case of Indian Christians in southern India a period of about three generations often, perhaps usually, sees them accepted as the equal of previous converts of most castes.

There are other points in which the exterior castes suffer socially. Thus exception is taken to their wearing the ornaments usually worn by higher castes, and in some cases they are not allowed to wear gold ornaments at all. Cases are on record in which Chamars for instance have been beaten for dressing like Rajputs, and the mounting of an exterior caste bridegroom upon a horse for his bridal procession has led to a boycott of the caste in question by the higher caste neighbours. In December 1930 the Kallar in Ramnad propounded eight prohibitions, the disregard of which led to the use of violence by the Kallar against the exterior castes whose huts were fired, whose granaries and property were destroyed and whose livestock was looted. These eight prohibitions were as follows :—

"(*i*) that the Adi-Dravidas shall not wear ornament of gold and silver;

(*ii*) that the males should not be allowed to wear their clothes below their knees or above the hips;

(*iii*) that their males should not wear coats or shirts or baniyans;

(*iv*) no Adi-Dravida shall be allowed to have his hair cropped;

(*v*) that the Adi-Dravidas should not use other than earthenware vessels in their homes;

(*vi*) their women shall not be allowed to cover the upper portion of their bodies by clothes or ravukais or thavanies;

(*vii*) their women shall not be allowed to use flowers or saffron paste; and

(*viii*) the men shall not use umbrellas for protection against sun and rain nor should they wear sandals".

In June 1931, the eight prohibitions not having been satisfactorily observed by the exterior castes in question, the Kallar met together and framed eleven prohibitions, which went still further than the original eight, and an attempt to enforce these led to more violence. These eleven prohibitions were :—

"1. The Adi-Dravidas and Devendrakula Vellalars should not wear clothes below their knees.

2. The men and women of the above said depressed classes should not wear gold jewels.

3. Their women should carry water only in mud pots and not in copper or brass vessels. They should use straw only to carry the water pots and no cloths should be used for that purpose.

4. Their children should not read and get themselves literate or educated.

5. The children should be asked only to tend the cattle of the Mirasdars.

6. Their men and women should work as slaves of the Mirasdars in their respective Pannais.

7. They should not cultivate the land either on *waram* or lease from the Mirasdars.

8. They must sell away their own lands to Mirasdars of the village at very cheap rates, and if they don't do so, no water will be allowed to them to irrigate their lands. Even if something is grown by the help of rain-water, the crops should be robbed away, when they are ripe for harvest.

9. They must work as coolies from 7 A.M. to 6 P.M. under the Mirasdars and their wages shall be for men Re. 0-4-0 per day and for women Re. 0-2-0 per day.

10. The above said communities should not use Indian Music (Melam, etc.), in their marriages and other celebrations.

11. They must stop their habit of going on a horse in procession before tying the Thali thread in Marriage, and they must use their house doors as a palanquin for the marriage processions and no vehicle should be used by them, for any purpose."

It is not suggested that the eight or eleven injunctions of the Kallar would be taken very seriously by any one but themselves, but they are quoted here to indicate the attitude often adopted towards the exterior castes. Similarly in Bengal the use by a Namasudra bridegroom of a palanquin in a marriage procession led to a disturbance, and other instances could probably be quoted from other parts of India.

Economically the exterior castes in eastern India are generally speaking self-supporting and by no means desperately poor. In western India their position often is that of scavenger or village menial for whose service there is a certain amount of necessity which is recompensed by a traditional provision of certain village lands or by other methods of payment in kind. The trouble frequently is that the number of these menials has become superfluous and they none the less expect to be fed by the village for unwanted services, and if they do not get so fed they steal the grain, no doubt regarding it as theirs by right. In southern India again the exterior castes are generally derived from various classes of cultivating serfs who until recently were tied to the soil. In northern India their economic position varies a good deal, since leather-workers for instance in industrial towns find a ready livelihood, whereas the exterior castes in the agricultural areas, where they can only obtain the worst land and the worst wells, are very often extremely poverty-stricken.

The origin of the position of the exterior castes is partly racial, partly religious and partly a matter of social custom. There can be little doubt that the idea of untouchability originates in taboo. Reminiscences of such a taboo are still to be seen in Burma where gravedigging is a profession involving a social stigma of a kind which will not permit of association with persons of other professions. A comparison of this custom with the position of those who dig graves for the hill tribes in the surrounding areas leaves little doubt but that the repulsion originates in the fear of some death infection, and the underlying idea is not that the person himself is polluted by unclean work but that his mere association with death may infect others with whom the grave-digger comes into contact with the probability of dying. The treatment of washermen all over India as a depressed caste is almost certainly traceable to a similar taboo, the objection perhaps arising from an association with the menstrual clothes of women and consequently an infection which, in the first instance, is magical though it later comes to be regarded merely as a matter of personal cleanliness. The untouchability which has originated in taboo has undoubtedly been accentuated by differences of race and the racial antipathies which seem common to every branch of the human family and have reinforced the magical taboo. An instance of this sort of thing may again be found in Burma, which, as there is no caste in the Indian sense, is useful as providing examples of the process of caste formation. Here pagoda slaves, the status of whom is hereditary, are looked down upon by other classes. In general pagoda slaves have been recruited from non-Burmese races. Large numbers of Arakanese, Talaings, Manipuris and Siamese have been settled in various parts of Burma by various conquering monarchs as slaves of different pagodas. This racial element is probably to be traced again in the prohibition of the wearing of ornaments by certain castes. Thus in the Naga Hills in Assam in the Ao tribe one of the sub-tribal groups, which is apparently of different origin to the rest of the tribe, is not allowed to wear ivory on both arms. Similar restrictions are found in the Laccadive Islands. The same element probably appears in the practice of hypergamy, and the first step which any section of an exterior caste takes in order to raise its social standing is to deny to other sections the right to marry its daughters though continuing for the time being to take wives from among them. Thus have the Haliya Kaibarttas severed themselves from the Jaliya Kaibarttas and established themselves as a separate caste, no longer depressed, and even so a section of the Namasudras is now attempting to segregate itself. Indeed as between different sections of the exterior castes prejudice is just strong as between the interior castes and the exterior castes generally. The Mahars in Bombay have objected to sharing their counsels and conferences with Chamars, and Mahars and Chamars have unanimously spurned the Bhangi. Similarly in Madras Pallars have objected to being classed with Chaklis whom they regard as no less inferior to them than the Paraiyans though all alike are untouchables to a good caste Hindu. Religion of ourse with its apparatus of holy vessels, sacred animals and sacrosanct priests has also contributed to the creation of the idea of untouchability, and society in general by its natural dislike of certain unclean occupations and by its very proper antipathy to criminal professions has done much to depress and stereotype the position of the exterior castes.

In 1916 and again in 1920, the Government of India called for a report as to the moral and material condition of the depressed classes and for proposals for their amelioration from all local governments. The records of the consequent reports will be found under *Proceedings of the Government of India in the Home Department*, Nos. 130—131 of July 1916, 329—341 of August 1920.

During the past decade a good deal has been done particularly in Madras to benefit the exterior castes in various ways. Not only has the Madras Government appointed a Commissioner of Labour entrusted with the task of encouraging the education of the depressed classes and of looking after their economic interests, but many private societies have also been at work. Besides a number of Christian Missions, the Depressed Classes Union, the Poor School Society, the Social Service League, the Andhra Deena Seva Sangam, and the Depressed Classes Mission of Mangalore are some of the institutions working for this object. The Arcot Mission has started an agricultural school and Local Boards have also been spending money towards the same end. In addition to this much has been done by the Self-Respect movement and the Depressed Classes Conference. The actual steps taken by the Government of Madras have been, besides the appointment of a Commissioner of Labour, the insistence on the right of admission of exterior caste pupils into all publicly managed schools, the refusal of grants-in-aid to privately managed schools which do not admit exterior caste pupils, the removal of publicly managed schools from places inaccessible to exterior castes, the opening of special schools and hostels for the exterior castes, the remission of their fees, and the provision of scholarships and of special facilities for the training of exterior caste teachers. On the economic side the Government of Madras has taken steps towards the provision of house sites for the relief of congestion and for purposes of freeing the exterior castes from oppression by their landlords, the organisation and running of co-operative societies, the provision of drinking water by constructing new wells and repairing old, the provision of burial grounds and sanitary requirements for the exterior castes, the assignment of land for cultivation both by reservation for and free assignment to exterior castes of lands not classed as valuable, that is, lands not affected by irrigation projects, and by reservation for exterior castes of lands classed as valuable and assignment to them on payment of market value in easy instalments. As a result of these measures some progress has been made. In 1920, there were 150,000 pupils of exterior castes in schools, in 1930, there were 230,000. Over 100,000 of these were in Christian Mission schools and many of the remainder in schools maintained by the societies mentioned above. Most of these schools are only primary schools, there being only about 2,700 pupils in educational institutions above the primary stage of whom about 50 only were in colleges. Out of 230,000 reading in schools in 1930 about 7,500 were girls. Of the 230,000 only 16,000, however, were reading in ordinary schools not reserved for exterior castes while over 70,000 pupils who did not belong to the exterior castes were reading in schools specially maintained for those castes. As compared with the rest of the population, while about 6 per cent. of the population of Madras was going to school when this census took place, only about 4 per cent. of the exterior castes were at school, and of that total less than 1 per cent. was beyond the primary stage. Economically very considerable sums have been spent by the Madras Government during the past ten years in financing and organising co-operative societies for the acquisition of land for house sites and for the granting of agricultural loans and for purposes of flood relief, rural credit and collective bargaining. In 1920, there were over 14,600 members of exterior castes in about 100 co-operative societies; as a result of the work done during the decade there are now about 2,000 such societies consisting mainly of exterior castes and during recent years new societies have been registered at the rate of over 100 a year. Over 55,000 house sites have been provided and some 300,000 acres of land have been assigned to exterior caste cultivators. But at the time of this census there were still six districts in Madras untouched by the activities of the Commissioner of Labour. In Bombay apart from the work done by private institutions among which the Servants of India Society is very prominent, little has yet been done. A Committee was appointed by the Government of Bombay to enquire into the condition of the depressed castes and aboriginal tribes in the Presidency in November 1928. As a result of the recommendations of that Committee an officer was appointed in 1931, charged with the duty of watching over the progress of and of upholding the rights of the backward classes. In addition to that a Resolution of the Government of Bombay directed the recruitment of members of the depressed classes in the police. It is perhaps significant that the Committee found it necessary to include in their recommendations an addition to the Government Servants' Conduct Rules framed with a view to enforcing polite treatment of the depressed classes by the officials of Government. In regard to the education of these classes in British India generally some information has already been given in Chapter IX. Many of the Indian States have also recognised the necessity for special measures for the uplift of exterior castes, in particular, Baroda, Cochin and Travancore; while in Gwalior and Jaipur action has been taken more particularly in regard to the criminal tribes of which there are considerable numbers in those States. In Jaipur areas of land have been allotted to the criminal tribes and special schools have been opened for the education of their children, and the same has been done in Gwalior.

The occasion of this census, coming as it did at a time when political reforms appeared imminent, complicated the already plentiful difficulties in the way of getting an exact return of number of exterior castes. A number of conflicting forces were at work, as, apart from the natural desire of individuals of exterior castes to raise their own social status by making themselves out to be something other than they were recognised to be by their neighbours, a definite movement was set afoot by the Hindu Mahasabha for the return of all Hindus as Hindu simply

with no qualifications of caste or sect. In 1928 the Hindu Mahasabha itself passed a resolution declaring that the so called untouchables had equal rights with other Hindus to study in schools, and to use wells and roads and temples, and the same resolution called on priests, barbers and washermen to afford their services to untouchables. At this census, however, political considerations probably overweighed all else and many efforts were made to induce untouchables to record themselves as 'Hindus' and nothing else. The exterior castes themselves were, however, generally alive to the fact that their interests required their numbers to be definitely known; at the same time they were not unconscious of the fact that it might be advantageous to them to represent as many castes as possible as being depressed in order to swell their numbers in importance. Consequently, while in the Punjab the All-India Shradhanand Depressed Classes Mission was calling on the exterior castes to return themselves as Arya Hindus instead of, for instance, Achuts or Dalits, the exterior castes' own leaders were calling on their followers to return themselves as *Ad-Dharmi* by religion and not Hindu at all; and in other provinces the associations of the exterior castes were representing as 'depressed' castes which very doubtfully fall into that category and many of which have been excluded on scrutiny. Generally speaking, however, it is believed that the figures for the exterior classes obtained at this census have been accurate on the whole and the methods adopted in different provinces to determine what constitutes an exterior caste have already been referred to, while extracts from some of the Provincial Reports will be found below.

Little information exists as to the actual numbers of these exterior castes who are entitled to a vote under the present constitution of the provinces. Except in the case of Madras, nomination has been resorted to to secure the representation of depressed classes. Four members have been so nominated in the Central Provinces, two each in Bombay and in Bihar and Orissa, one each in Bengal and in the United Provinces and none in the Punjab or in Assam. In Madras ten members were nominated to represent nine specified communities recorded as depressed, while individuals of the exterior castes were not debarred of course from voting in a general constituency if they happened to be qualified as electors. It has been estimated that there are in Madras rather less than 57,000 exterior caste electors in a total of more than 1¼ million "non-Mahomedan" voters, that is to say, about 4½ per cent., though the exterior castes form some 16 per cent. of the total non-Muslim population. In Bombay a rough estimate has been made that there are 15,600 exterior caste voters out of a total of 759,000 voters in all the general constituencies, that is, about 2 per cent. of the exterior castes have votes, whereas they comprise over 8 per cent. of the population of the Presidency.

The following Tables A and B will give some indication of the numerical constitution of the depressed castes and of their distribution and comparative literacy. It should be made clear that figures for literacy are available in part only, and the percentage shown as literate is the percentage calculated on that total only for which figures of literacy are available.

TABLE A.

Name of Caste, etc.	Total number treated as exterior.	Locality in which treated as exterior.	Remarks.
Adiya	5	Coorg.	
Ager	7,108	Bombay, Western India States Agency.	
Aheri (Aheria)	24,375	Ajmer-Merwara, United Provinces and Rajputana.	
Ajila	659	Madras.	
Alavan	734	Travancore.	
Ambattan	305	Travancore	Barber castes elsewhere not treated as exterior.
Arakh	85,907	United Provinces.	
Aranadan	60	Madras.	
Arayan	23,380	Travancore.	
Arunthuthiyar			Included with Chakkiliyan.
Audhelia	749	Chattisgarh (C. P.).	
Bagri (Bagdi, Badhik) ..	1,023,127	Ajmer-Merwara, Bengal, U. P., Gwalior, Rajputana.	
Bahelia	49,907	Bengal, United Provinces.	
Bahna	6	Amraoti (Berar).	
Baira	1,879	S. Kanara (Madras).	
Baiti	8,888	Bengal.	
Bajania, etc.	34	United Provinces	Total recorded 7,876 elsewhere not treated as exterior.
Bakuda	806	S. Kanara (Madras).	
Balai (Balahi)	561,662	Ajmer-Merwara, Central Provinces and Berar (parts) United Provinces, Central India, Gwalior, Rajputana.	

Name of Caste, etc.	Total number treated as exterior.	Locality in which treated as exterior.	Remarks.
Balagai	130	Coorg.	
Bandi (Kabaria)	1,066	United Provinces, S. Kanara (Madras).	
Barar	1,384	Gwalior.	
Bargi	1,668	Ajmer-Merwara, Rajputana.	
Bargunda	1,931	Gwalior.	
Bariki	3,695	Ganjam and Vizagapatam (Madras).	
Barwala (Barwar) ..	9,996	U. P., Jammu and Kashmir.	
Basith	6,213	Jammu and Kashmir State.	
Battada	558	S. Kanara (Madras).	
Batawal	5,645	Jammu and Kashmir State.	
Bauri (Bavari, Bawaria) ..	721,299	Bengal, Bihar and Orissa, Delhi, Madras, Punjab, United Provinces, Travancore.	
Bazigar	372	Rajputana	Total recorded 2,734. Not elsewhere treated as exterior.
Bedar	490	Central Provinces and Berar (part) ..	Total recorded 991,536. Not elsewhere treated as exterior.
Beldar	3,139	Bengal	Total Beldar, Bind, Nuniya, Od and Waddar recorded as 561,926 for India. Only reported exterior in Bengal and Punjab but latter figures not included here. Treated also as depressed by Mysore State.
Bellara	87	S. Kanara (Madras).	
Beriya (Bediya)	25,155	Bengal, Gwalior, United Provinces.	
Berua	367	Bengal.	
Bhambi (Bambhi) ..	183,917	Ajmer-Merwara, Bombay, Central India, Rajputana, Western India States Agency.	
Bhangi (Lalbegi, Mehtar, Halalkhor).	865,453	Ajmer-Merwara, Andamans and Nicobars, Assam, Bengal, Bihar and Orissa, Bombay, Central Provinces and Berar, United Provinces, Baroda, Central India, Gwalior, Rajputana, Sikkim, Western India States Agency,	
Bhar	461,624	United Provinces	See Rajwar.
Bharathar	275	Travancore.	
Bhatiya..	322	Bengal.	
Bhil	28	United Provinces.	
Bhogta	66,054	Bihar and Orissa.	
Bhuinmali	111,439	Assam, Bengal.	
Bhuiya, etc.	738,479	Bengal, Bihar and Orissa, Sikkim, United Provinces.	Includes Agaria, Chero, etc., in U. P.
Bhumij	266,464	Bihar and Orissa.	
Bidakia	63	Rajputana.	
Bind	19,518	Bengal.	
Binjhia	317	Bengal.	
Byagari	8,459	Bellary (Madras).	
Chachati	5,130	Vizagapatam (Madras).	
Chadar	21,071	Central Provinces.	
Chakkaravar	3,536	Travancore.	
Chakkiliyan	630,359	Madras and Travancore.	
Chalavadi	3,422	Bellary (Madras).	
Chamar (Chambhar, Khalpa, Samagara, Satnami).	11,751,187	Ajmer-Merwara, Andamans and Nicobars, Baluchistan, Bengal, Bihar and Orissa, Bombay, Central Provinces and Berar, Coorg, Delhi, Madras, North-West Frontier Province, Punjab, United Provinces, Baroda, Central India Agency, Gwalior, Jammu and Kashmir, Rajputana, Western India States.	India total 12,195,516 returned from the Provinces here mentioned.
Chauhan	2,026	Drug (Central Provinces).	
Chaupal	2,737	Bihar and Orissa.	
Chavalakkaran	1,730	Travancore.	
Chayakkaran	2,168	Travancore.	
Chuhra	484,596	Baluchistan, Delhi, N.-W. F. P., Punjab, Jammu and Kashmir.	
Dabgar	1,366	Ajmer-Merwara, United Provinces, Rajputana.	See Muchi.

Name of Caste, etc.	Total number treated as exterior.	Locality in which treated as exterior.	Remarks.
Dahayat	833	Damoh (Central Provinces).	
Damai	7,905	Bengal and Sikkim.	
Dandasi	44,248	Ganjam (Madras).	
Devendrakulathan ..	4,019	Tamilnad (Madras).	
Dewar	1,786	Chhattisgarh (Central Provinces).	
Dhanak	33,737	Ajmer-Merwara, Saugor (Central Provinces), Delhi, Rajputana.	India total (with Kandra, *q.v.*) 758,671.
Dhenuar	44	Bengal.	
Dhimar	46,071	Central Provinces and Berar (parts). ..	Not elsewhere treated as exterior.
Dhiyar	3,165	Jammu and Kashmir.	
Dhobi	1,406,291	Assam, Bengal, Bihar and Orissa, Central Provinces and Berar, United Provinces, Sikkim.	India total including Vannan (*q. v.*), Parit and Veluttedan 3,161,428.
Dhor (Dohor)	24,983	Bombay, Central Provinces and Berar.	
Doai	1,960	Bengal.	
Dom (Domar, Dombo, Dumna, Bansphor, Basor, Dharkar, Patni, Wansfoda).	884,403	Ajmer-Merwara, Assam, Baroda, Bengal, Bihar and Orissa, Bombay, Central Provinces and Berar, Madras, Punjab, United Provinces, Central India, Jammu and Kashmir, Rajputana, Gwalior.	*N.B.*—Hyderabad figures probably included under "Others".
Dugla	9,523	Assam.	
Dusadh	1,400,878	Bengal, Bihar and Orissa, United Provinces.	
Eravalan	541	Cochin.	
Ganda	108,843	Central Provinces	*See* Pan.
Gardi	173	Jammu and Kashmir.	
Garoda	22,137	Ajmer-Merwara, Baroda, Rajputana, Western India States Agency.	
Ghancha	4,862	Ajmer-Merwara, Rajputana.	
Ghasia	132,382	Baluchistan, Bengal, Bihar and Orissa, Central Provinces, Ganjam and Vizagapatam (Madras).	
Ghokha	48,622	Bihar and Orissa.	
Ghusuria	1,846	Bihar and Orissa.	
Gidhiya	191	United Provinces.	
Godagali	969	Ganjam and Vizagapatam (Madras).	
Godari	419	Do.	
Godda	146	S. Kanara (Madras).	
Godra	1,553	Bihar and Orissa.	
Gonrhi	5,149	Bengal.	
Gosangi	244	Chingleput (Madras).	
Habura	1,915	United Provinces.	
Haddi (Relli)	41,672	Ganjam and Vizagapatam (Madras) ..	No doubt the same caste originally.
Hari (Brittial)	262,354	Assam, Bengal, Bihar and Orissa ..	
Hasala	368	S. Kanara (Madras).	
Hira	16,628	Assam.	
Ilavathi..	6,955	Travancore.	
Iravan	869,863	Travancore.	
Irika	332	Bihar and Orissa.	
Irulan	240	Cochin.	
Jaggali	3,020	Ganjam and Vizagapatam (Madras).	
Jaliya Kaibartta ..	501,146	Assam, Bengal.	
Jambuvulu	6,701	Godavari (Madras).	
Jangam	12	Bhandara (Central Provinces).	
Jhalo Malo	208,925	Surma Valley (Assam), Bengal.	
Jhamral	1,519	Central India.	
Jolaha	40	Jammu and Kashmir.	
Jugi	83,922	Surma Valley (Assam).	
Kadan	758	Madras, Cochin	Strictly speaking a jungle tribe, but treated as untouchable.
Kadar	1,078	Bengal.	
Kaikari	2,157	Central Provinces and Berar.	

Name of Caste, etc.	Total number treated as exterior.	Locality in which treated as exterior.	Remarks.
Kaikolan	455	Travancore.	
Kakkalan	1,666	Travancore.	
Kalbelia	4,133	Ajmer-Merwara, Rajputana.	
Kalladi, Kalloda	5,739	Malabar (Madras), Coorg.	
Kalwar	13,627	Bengal, Sikkim.	
Kan	66	Bengal.	
Kanakkan	35,238	Malabar (Madras), Cochin.	
Kandra	159,837	Bengal, Bihar and Orissa.	See Dhanak.
Kaniyan	15,652	Travancore.	
Kanjar	30,457	Ajmer-Merwara, Bihar and Orissa, United Provinces, Gwalior, Rajputana.	
Kaora	107,908	Bengal.	
Kapali	165,583	Bengal.	
Kaparia	973	Bengal, United Provinces.	
Karenga	9,855	Bengal.	
Karimpalan	2,807	Malabar (Madras).	
Karwal	108	United Provinces.	
Kathikkaran	161	Travancore.	
Katia	24,510	Central Provinces.	
Kattunayakan	1,581	Malabar (Madras).	
Kavathi	2,293	Travancore.	
Kavera	790	Cochin.	
Kela	9,493	Bihar and Orissa.	
Keralamuthali	1,423	Travancore.	
Khairwa	81	United Provinces.	
Khangar	10,577	Ajmer-Merwara, Central Provinces and Berar (part), Rajputana.	
Khatik	241,493	Baluchistan, Bengal, Central Provinces and Berar (part), Delhi, United Provinces, Gwalior.	India total recorded, 412,620.
Kichak	2	Bengal.	
Kingharia (incl. Dharhi, Pawaria).	7,599	United Provinces.	
Kodalo	28,410	Ganjam (Madras).	
Kol	76,845	United Provinces	Treated as an exterior caste in United Provinces only, elsewhere as a forest tribe.
Kolcha	1,114	Bombay.	
Koli and Dagi	263,751	Delhi, Punjab, Gwalior.	
Koli Dhor	26,358	Bombay, Western India States Agency.	
Konai	41,058	Bengal.	
Konwar	133	Bengal.	
Koosa	818	S. Kanara (Madras).	
Kootan	228	Cochin.	
Koraga	4,042	Bellary, S. Kanara (Madras).	
Korama (Kuruman) ..	10,575	Coorg, Malabar (Madras).	
Kori (Koria)	964,661	Andamans and Nicobars, Baluchistan, Central Provinces and Berar (part), United Provinces, Rajputana.	
Korwa	467	United Provinces	Elsewhere treated as a primitive tribe.
Kotal	7,651	Bengal.	
Kotwar	64	United Provinces.	
Kotwalia	1,469	Bombay, Western India States.	
Kuchband	395	Ajmer-Merwara, Rajputana.	
Kudiya	4,046	Coorg, S. Kanara (Madras).	
Kudubi	12,011	Madras.	
Kudumban	827	Tamilnad (Madras).	
Kumhar	23,863	Central Provinces and Berar (part).	
Kurariar	631	Bihar and Orissa.	
Kuravan	89,181	Travancore, Malabar (Madras).	
Kurichchan	7,112	Malabar (Madras).	
Lippara	4	Coorg.	

Name of Caste, etc.	Total number treated as exterior.	Locality in which treated as exterior.	Remarks.
Lohar	50,178	Bengal, Sikkim.	Probably refers to the Gurkhali Lohar generally treated as exterior.
Mahar, (Cheruman, Dher, Holeya*, Holar, Mal, Mala Mehra, Pulayan, Vankar).	5,447,947	Ajmer-Merwara, Assam, Bengal, Bombay Coorg, Central Provinces and Berar, Madras, United Provinces, Baroda, Central India, Rajputana, Hyderabad, Cochin, Travancore, Western India States Agency.	* With Adikarnataka in Mysore.
Mahuria	2,389	Bihar and Orissa.	
Maila	1,431	S. Kanara (Madras).	
Mala Dasu	2,399	Andhradesh (Madras).	
Malasar	5,101	Madras.	
Malayan	3,185	Cochin.	
Maleya	123	Coorg.	
Mallah	26,252	Bengal.	
Mang (Madiga, Matangi, Megh, Meghwal, Madgi).	2,547,537	Ajmer-Merwara, Coorg, Bombay, Central Provinces and Berar, Madras, Punjab, Baroda, Central India, Hyderabad Jammu and Kashmir, Rajputana, Western India States Agency.	Madiga is included with Adikarnataka in Mysore.
Mang Garudi	4,334	Bombay.	
Mangan	184	Bihar and Orissa.	
Maravan	14,399	Travancora.	
Marakkan	353	Travancore.	
Mavillan	1,341	Malabar (Madras).	
Medara (Madari)	7,021	Coorg, Madras, Travancore.	
Moger	773	S. Kanara (Madras).	
Muchi (Mochi, Mucchi) ..	458,206	Assam, Bengal, Bihar and Orissa Central Provinces, and Berar, Coorg, Ganjam (Madras), United Provinces, Sikkim.	India total (including Dabgar and Jingar) 1,026,405 but not everywhere treated as exterior.
Mukkuvan	596	Travancore.	
Mundala	6,337	Coorg, S. Kanara (Madras).	
Musahar	810,535	Bengal, Bihar and Orissa, United Provinces.	
Nadar	233,982	Travancore.	
Nadia	622	Baroda.	
Nagar	16,164	Bengal.	
Nagarchi	5,970	Central Provinces and Berar.	
Naiya	40	Bengal.	
Nale Kanavaru	9	Coorg.	
Nalekeyeva	1,489	S. Kanara (Madras).	
Namasudra (Chandala) ..	2,267,589	Assam, Bengal, Vizagapatam (Madras).	
Nat	61,175	Ajmer-Merwara, Baluchistan, Bengal, Bihar and Orissa, United Provinces, Rajputana.	
Nayadi	816	Malabar (Madras), Cochin, Travancore.	
Nulayan	3,129	Travancore.	
Ojha	1,718	Central Provinces (parts).	
Pagadai	771	Tamilnad (Madras).	
Paidi	39,437	Ganjam, Vizagapatam (Madras).	
Painda	92	Ganjam (Madras).	
Paky	2,017	N. Circars (Madras).	
Palaiya	43,160	Bengal.	
Pale	3,192	Coorg.	
Pallan	855,104	Madras, Travancore.	
Pambada	335	S. Kanara (Madras).	
Pamidi	424	Ganjam (Madras).	
Pan (Panka, Pano, Panik)	688,456	Bengal, Bihar and Orissa, Central Provinces (part), Madras.	Total recorded (with Ganda, *q. v.*, and Baraik) 1,241,322.
Panan	3,812	Travancore.	
Panchama	95,145	Coorg, Madras.	
Panikkan	402	Coorg, Travancore.	
Paniyan	32,410	Malabar (Madras).	
Panniandi	54	Tamilnad (Madras).	
Paraiyan (Sambavam) ..	1,200,135	Coorg, Madras, Cochin, Travancore.	
Paravan	14,428	Madras, Travancore.	
Pardhan	71,906	Central Provinces and Berar.	
Pardhi	41	Narsinghpur (Central Provinces).	
Pasi	1,651,478	Ajmer-Merwara, Andamans and Nicobars, Baluchistan, Bengal, Bihar and Orissa, United Provinces, Rajputana.	
Pod	667,731	Bengal.	
Pulluvan	527	Travancore.	

Name of Caste, etc.	Total number treated as exterior.	Locality in which treated as exterior.	Remarks.
Pundari	31,255	Bengal.	
Puthirai Vannan ..	74	Tamilnad (Madras).	
Raigar	152,704	Ajmer-Merwara, Rajputana.	
Raju	56,778	Bengal.	
Rajwar (Rajjhar) ..	22,554	Bengal, Central Provinces (part) ..	Treated as exterior also by Census Superintendent of Bihar and Orissa. Total recorded for India (with Bhar, *q. v.*) 630,708.
Raneyar	1,480	Madras.	
Ratal	488	Jammu and Kashmir.	
Rawal	790	Ajmer-Merwara, Rajputana.	
Relli	..	.. ..	Included in Haddi.
Sansi	39,403	Ajmer-Merwara, Delhi, Punjab, United Provinces, Rajputana.	
Sahariya	14,113	United Provinces.	
Sanaurhiya	31	United Provinces.	
Sarbhangi	23	Rajputana.	
Sargara	32,062	Ajmer-Merwara, Rajputana.	
Saryara (Sarera)	9,437	Punjab, Jammu and Kashmir.	
Satia	1,184	Ajmer-Merwara, Rajputana.	
Saun	2,275	United Provinces.	
Silpkar	313,737	United Provinces.	
Siyal	9,281	Bihar and Orissa.	
Shagirdapesha ..	333	Bengal.	
Shenva	9,643	Baroda.	
Sunri	76,922	Bengal, Sikkim.	
Surava	3	Coorg.	
Sutradhar	12,575	Assam	A boat building caste; distinct from "Viswabrahmans".
Samban..	557	Tamilnad (Madras).	
Sapari	462	Vizagapatam (Madras).	
Semman	1,198	Tamilnad (Madras).	
Tirgar	713	Ajmer-Merwara, Rajputana.	
Tiruvalluvar	207	Madras.	
Thantan	41,214	Travancore.	
Thantapulayan	795	Travancore.	
Tharu	31,578	United Provinces.	Treated as a primitive tribe in Bihar and Orissa. Not treated as depressed in Bengal.
Thontaman	684	Travancore.	
Thoti	1,639	Chingleput (Madras).	
Thori	17,455	Ajmer-Merwara, Rajputana, Baroda.	
Timali	68	Bombay.	
Tiyar	96,413	Bengal.	
Turi	70,240	Bihar and Orissa, Bengal	A depressed tribal unit.
Turi	4,970	Baroda, Western India States Agency, Bombay.	
Ullatan	778	Cochin.	
Valan	21,172	Travancore.	
Valluvan	59,414	Madras, Cochin.	
Vannan	13,433	Travancore.	
Varnavar	166	Do.	
Velakkithalanayar ..	30,603	Do.	
Velan	16,253	Do.	
Veluthadanayar	14,878	Do.	
Vetan	9,496	Do.	
Vettakkaran	498	Do.	
Vettuvan	40,122	Madras, Cochin.	
Vitholia..	526	Bombay.	
Watal	13	Jammu and Kashmir.	
Yadavan	8,457	Travancore.	
Adi-Andhra	664,844	Madras.	
Adi-Dravida	2,620,571	Coorg, Madras, Mysore, Travancore.	
Adi-Karnataka	644	Madras.	
Tea Garden Coolie castes ..	1,233,512	Assam.	
Others (Sudra, Valmiki, Ramdasia, unnamed, minorand unspecified).	218,846	Assam, Baluchistan, Bombay, Madras, Baroda, Hyderabad, Travancore, Punjab	
Total ..	50,195,770		

TABLE B.

Province or State.	Total Population.	Total Hindu.	Total Exterior castes.	Percentage of Exterior castes on— Hindu Population.	Percentage of Exterior castes on— Total Population.	Percentage of Exterior castes who are literate.
INDIA	**350,529,557**	**239,195,140**	**50,195,770**	21	14	1·9
Provinces	**271,431,549**	**177,727,988**	**39,064,009**	22	14	1·6
1. Ajmer Merwara	560,292	434,509	76,816	18	14	2·2
2. Andamans and Nicobars ..	29,463	7,618	512	7	2	?
3. Assam	8,622,251	4,931,760	1,829,009	37	21	3·1
4. Baluchistan (*Districts and Administered Territories*).	463,508	41,432	5,702	14	1	6·9
5. Bengal	50,114,002	21,570,407	6,899,809	32	14	5·0
6. Bihar and Orissa	37,677,576	31,011,474	5,744,393	19	15	0·6
7. Bombay	21,854,866	16,621,221	1,750,424	11	8	2·8
8. Burma	14,647,497	570,953	No return of caste.			
9. Central Provinces and Berar ..	15,507,723	13,338,223	2,818,346	21	18	1·5
10. Coorg	163,327	146,007	24,803	17	15	1·5
11. Delhi	636,246	399,863	72,883	18	11	1·4
12. Madras	46,740,107	41,277,370	7,234,104	18	15	1·5
13. North-West Frontier Province ..	2,425,076	142,977	5,468	4	..	3·6
14. Punjab	23,580,852	6,328,588	1,279,459	20	5	0·8
15. United Provinces of Agra and Oudh	48,408,763	40,905,586	11,322,281	28	23	0·5
States and Agencies	**79,098,088**	**61,467,152**	**11,131,761**	18	14	3·1
16. Assam States	625,606	272,890	1,421	1	..	12·9
17. Baluchistan States	405,109	12,249	20	..	..	2·5
18. Baroda State	2,443,007	2,152,071	203,043	9	8	10·3
19. Bengal States	973,336	641,662	30,822	5	3	?
20. Bihar and Orissa States	4,652,007	4,194,878	631,864	15	14	1·0
21. Bombay States	4,468,396	3,921,088	348,574	9	8	2·8
22. Central India Agency	6,632,790	5,852,204	797,902	14	12	0·3
23. Central Provinces States.. ..	2,483,214	1,788,401	252,732	14	10	0·5
24. Gwalior State	3,523,070	3,271,576	678,119	21	19	?
25. Hyderabad State	14,436,148	12,176,727	2,473,230	20	17	0·6
26. Jammu and Kashmir State ..	3,646,243	736,222	170,928	23	5	0·5
27. Madras States Agency	6,754,484	4,323,150	1,960,370	45	29	13·8
Cochin State	*1,205,016*	*780,484*	*125,339*	*16*	*10*	*4·8*
Travancore State	*5,095,973*	*3,134,888*	*1,769,735*	*56*	*35*	*14·9*
Other Madras States	*453,495*	*407,778*	*65,296*	*16*	*14*	*3·5*
28. Mysore State	6,557,302	6,015,880	1,000,326	17	15	1·4
29. North-West Frontier Province (*Agencies and Tribal Areas*).	46,451	13,651	542	4	1	?
30. Punjab States	437,787	383,883	94,347	25	22	0·3
31. Punjab States Agency	4,472,218	1,887,249	392,999	21	9	
32. Rajputana Agency	11,225,712	9,578,805	1,565,409	16	14	0·4
33. Sikkim State	109,808	47,074	2,029	4	2	?
34. United Provinces States.. ..	1,206,070	950,724	208,864	22	17	0·2
35. Western India States Agency ..	3,999,250	3,245,768	318,220	10	8	1·9

The following extracts are taken from the Provincial and State Reports on the subject of the depressed classes.

The treatment of the subject by the Census Superintendent of Assam has already been mentioned as typical of the method adopted in all provinces at this census. He writes as follows :—

Assam.—Under the orders of the Census Commissioner for India a list of depressed and backward classes has to be prepared for every province in India. The invidious task of preparing such a list for Assam has, therefore, been laid upon me and I am compelled, however reluctantly, to assume the functions of a modern Ballal Sen..... "Depressed" as used in India in connection with caste has come to be associated particularly with persons belonging to certain castes in Madras who are unapproachable, whose touch necessitates immediate purification and who are not allowed to read in the schools along with other boys.

There is, I am glad to say, no such degree of depression in Assam ; an un-approachable caste is unknown here and boys of all castes are freely admitted into all schools and colleges. Nor are there any difficulties worth mentioning as regards the drawing of water by all castes from public 'tanks' and wells.

Hence I would be loath to apply to any caste in this province an adjective which has come to connote an extreme state of degradation. The expression "depressed castes" does however occur frequently in this note in the extracts quoted from the opinions of various officers. This is merely because these opinions were received before I had decided that I would not use the term in Assam.

The unusual expression "Hindu Exterior Castes" has been invented by me in accordance with the permission given by the Census Commissioner for India to Provincial Superintendents to use any expression which they considered more suitable to local conditions than the hackneyed term "depressed".

To return to our three divisions :—

(1) "*Hindu Exterior Castes*".—This, as I have confessed, is an expression to which I plead guilty. I am by no means proud of it and it is open to many criticisms. I have however asked many Indian gentlemen to give me a better one but they have not succeeded. The expression, as it stands, connotes castes which are Hindu castes but which are outside something and that is really what I mean to imply.

What are they outside ? The answer is that they are outside the social pale of Hindu Society ; that they are "below the salt" ; that they are on the other side of a barrier which prevents them from moving upwards.

But before going further I must define what I mean by "Hindu Exterior Castes".

By this expression I mean castes recognized definitely as Hindu castes whose water is not acceptable and who, *in addition*, are so deficient as castes in education, wealth and influence or, for some reason connected with their traditional occupations, are so looked down upon that there seems little hope of their being allowed by Hindu Society to acquire any further social privileges within—at any rate—the next decade.

By the use of the word "exterior caste" I certainly do not intend to imply that such a caste can never raise itself to a higher level. On the contrary I intend to imply that this can happen, as it actually has happened in the past, and that an exterior caste may in the course of time possibly become what I may call an "interior" one.

It is impossible to lay down any simple test to distinguish members of the Hindu exterior castes in Assam from others. The main test to distinguish "clean" castes from "unclean" castes is whether the water of the caste is accepted by members of the upper castes. A caste whose water is acceptable is known in the Surma Valley as "*jalchal*" and a caste whose water is not accepted may be conveniently defined as "*jal-achal*". In Assam the words "*pani chale*" and "*pani na chale*" are in vogue. But we cannot apply this simple test alone in order to find out which castes are exterior and which are not. It is true that all exterior castes are *jal-achal* but it is not true that all *jal-achal* castes are exterior. For example in the Sylhet district the Shahas are technically a *jal-achal* caste but they are a very wealthy and influential community who are treated with considerable respect in society and by a peculiar social convention are permitted to purchase their brides from the higher castes.

The Shahas are in fact a good example of a caste which though technically unclean have by their own efforts raised themselves to a position in which the upper classes simply cannot afford to ignore them.

I have not therefore classed the Shahas as an "Exterior Caste". One of my friendly critics, Babu K. C. Dutta, Extra Assistant Commissioner, has taken up this point.

> "You do not class" he writes "the Shahas as an exterior caste simply because of their education and the wealth and influence they command. Yet they are not *jal-chal*, they are not allowed entrance into the *Thakurghar* of the cleaner castes and the disability is not likely to be relaxed in the next decade. I do not concede for a moment that the disabilities that bar the Shahas are any more pronounced in the case of the less influential and uncultured castes. These exterior castes are suffering from want of education, wealth, culture, in fact, all that contributes to social influence. As soon as they have achieved these, their position will be akin to that of the Shahas—neither clean nor depressed."

The Shahas are, of course, exterior to the extent that they fall on the other side of the great line which divides Hindu Society—the *jal-chal* line—but though this line is still of great importance other things must be taken into consideration.

If, for example, the Patnis and Namasudras could shake off the tradition which associates them with occupations regarded as low (most of them are now cultivators but tradition associates them with fishing and boat-plying) and could acquire, as a caste, a reputation for wealth and culture they would, I admit, be in much the same position as the Shahas are to-day.

This process will, however, take many generations and in the meantime they are, in my opinion, clearly suffering from greater disabilities than the Shahas, the disabilities being the very absence of those factors which have made the Shahas a respected caste.

Thus while the *jal-chal* line is a useful line of division between the upper and the lower castes it is not of much use as a test for determining the "Exterior Castes". Nor does the test of temple entry afford us much assistance.

Generally speaking in the Surma Valley all castes which are "*jal-achal*" are not allowed into the actual *Thakurghar* of temples in which the higher castes worship and are not allowed to assist in the ceremonies by bringing tulsi and flowers with which to decorate the idol. *Jal-achal* castes are however allowed "darshan" and are permitted to come into the compound of the temple. In the Assam Valley where the "*Namghar*" generally takes the place of the temple the same principle holds good but a distinction is made between different classes of *jal-achal* castes. Nadiyals and Banias for example are not allowed at all into the *Namghars* of higher castes whereas Katonis and Suts are allowed in some districts to enter the part not regarded as particularly holy, *i.e.*, they are not allowed to enter the *Monikhut*.

The whole matter being, therefore, so indeterminate how, it may be asked, can I possibly venture to say, with any degree of certainty, what castes are exterior. The only possible method was to find out by local enquiry in each district the general social position of all castes which might be thought to come under the definition of "exterior castes". This is the method I adopted.....

Caste in the Assam Valley is not, as elsewhere, chiefly a functional division; it is really a racial division and functional castes are very few.

Probably for that reason Hinduism in that valley is tolerant towards the tribal communities which have not yet been completely absorbed into its organism. It must, in fact, be extremely difficult for an Assamese Hindu to despise at heart a man whose Hinduism is open to considerable doubt but who considers that he is just as good a man as any Koch or Kalita. In fact people like the Deoris consider that they are much better and don't care who knows it. Nobody can be depressed who hits you with a big stick if you attempt to show your contempt for him.

As a result the only castes in the Assam Valley which can be called exterior are castes which are either traditionally associated with some degrading occupation (such as selling fish) or whose traditional origin is associated with a bar sinister. About some castes in this valley there is, however, no possible doubt. Let us deal with these first.

There is, I consider, no doubt that in the Assam Valley the caste which at this census has adopted the name of Bania and which at previous censuses was styled Brittial-Bania is an exterior caste. Some of the leading men of this community have in fact informed me that their position in society is hopeless and have asked to be classed as a depressed caste.

That this caste is an exterior caste is also the unanimous opinion of all responsible officers whom I have consulted.

Nor is there any doubt about the large class which has now adopted the caste name of Kaibartta—and which was previously known as Nadiyal; nor about the Charals of Lower Assam who now call themselves Namasudras with their offshoot the Hiras. The general opinion about all these castes is unanimous.

Thus the Census Officer, Dhubri, reports :—

> "Namasudras or Nadiyals or Jaluas or Charals or Kaibarttas or Doms are considered untouchable by caste Hindus who neither admit them into their places of worship nor take water touched by them"

and the Census Officer, Jorhat :—

> "Among the indigenous Assamese castes the following are depressed :—
>
> (1) Kaibarttas or Nadiyals or Doms.
>
> (2) Brittial-Banias.
>
> (3) Hiras or Charals (found in Lower Assam only)".

From Darrang comes further evidence :—

> " That Doms, Nadiyals, Namasudras, Charals, Hiras and Brittial-Banias are depressed, is admitted by the members of the community themselves who were consulted," writes the Census Officer.

In fact in every district of the Assam Valley the opinion is unanimous that the Brittial-Banias and the Kaibarttas (which name may be taken to include Charals, Nadiyals, Hiras and all the other names which from time to time have been applied to various branches of this family) are the most exterior castes in the whole of the Assam Valley.

These castes are socially " outside the pale " and though the Brittial-Banias have worked hard to improve their position and have a considerable number of educated men amongst them they appear to be as far off as ever from any sort of social recognition.

Ancient custom and practice have ordained that members of these castes are to be treated as practically untouchable. It is true that the former necessity of taking a bath if touched by a member of one of these castes has fallen into disuse but a Brahman officer of about 30 years of age has informed me that when he was a small boy he had to take a bath if, by accident, he was touched by one of the hated Doms.

Above these castes came others whose position seemed to me for a long time to be extremely doubtful. They are the Naths or Jugis (known in Upper Assam as Katonis) and the Suts who are also commonly called Borias.

A careful study of the position of these castes has however convinced me that I would be wrong to class them as exterior.....The truth about the Naths and the Suts appears to be that they are exterior castes who have made considerable efforts to raise themselves socially and that their efforts are beginning to bear fruit. There is a bar against them but they are beginning to break through it : they are really " superior exterior castes " who are moving upwards. There is, in fact, hope for them. As one Assamese officer has briefly expressed it :—

> " All Assamese low castes have a chance of rising in the social scale except the Doms and Haris whose case is hopeless."

The Suts and Naths do not themselves desire to be classed as depressed or exterior and in fact strongly object to it.....

> " The Education Department in 1915 provided three general dining halls and four separate rooms and the understanding has always been tha the upper caste boys are to dine in the general dining halls and the depressed or backward class boys are to use the above four rooms..... For the last two years, there has been a very strong movement for admitting these remaining ' backward ' caste boys into the general dining hall—there is an overwhelming majority in their favour, only a small minority of about five or six still being in the opposition."

Professor Sen Gupta has subsequently informed me that the movement referred to in the last paragraph of his note resulted in August 1931 in the abolition of the remaining restriction and that—as a tentative measure—permission was given to the students who had formerly dined in the four rooms set apart to dine in the general dining hall. The Professor thinks it probable that the concession will continue.

This last piece of information, I confess, surprised me. If the concession is allowed to continue it will reflect great credit on the liberal spirit of Professor Sen Gupta's mess and may, in time, have a far-reaching effect on social custom in the Assam Valley. It does not, however, change my opinion that the Kaibarttas and Banias are definitely " exterior castes ".

On the whole I feel fairly confident that my classification of exterior castes in the Assam Valley is correct.....

I only wish I felt as confident about the exterior castes in the Surma Valley.

Conditions in that Valley are very different from those in the Assam Valley. Sylhet is linguistically and ethnologically connected with Bengal and the inclusion of this large district in Assam was originally merely a measure of administrative convenience.

Sylhet and Cachar (which is largely populated by people of Sylhetti origin) are therefore essentially Bengali in their culture. Hence there are many more functional castes than in the Assam Valley where, as I have already explained, caste is largely racial. Moreover, the presence of a large upper caste zamindar class in Sylhet—the arbitrators of social usage—has not tended to encourage any relaxation in the treatment of the lower orders of society..... Take for example the case of a M. A. of the Sylhet Mali caste occupying a good Government post. Many responsible Hindu officers have informed me definitely that if such a person came alone to see them in their paternal homes a chair would not be offered to the guest. A *jol-chauki* (small wooden stool) *might* be offered. Even Muslims treat these low castes in the same way. A Muslim Sub-divisional Officer tells me that if a Dhubi friend of his occupying a good position in Government service were to come to his house to see him " I would not offer him a chair. I would simply say " sit down " and the Dhubi would not take a chair."

Surely if the upper caste Hindus wished to help the lower castes the least they might do is to treat the educated men among the lower castes with the same courtesy as they would extend to an educated Muslim.

The following opinion of a responsible Hindu Government officer is of interest: "Some low caste men by their *submissive attitude* win the hearts of the upper caste men and get partial admission into society. Others claim as of right and get refused. A lot depends on the man himself. If he claims too much he gets badly snubbed. In places where orthodoxy is strong he will not, in any case, get fair treatment. In the towns treatment is more liberal than in the villages. In the villages orthodoxy still prevails. If a Patni is the tenant of a Zemindar he will never get fair social treatment however highly educated he is. Orthodoxy is strongest amongst the Zemindars. But if the low caste man is an executive officer such as a Sub-Deputy Collector or an Extra Assistant Commissioner he would be given better treatment than a non-executive officer, *e.g.*, than a Deputy Inspector of Schools". The above remarks refer, of course, only to private social intercourse. On all social and public occasions the educated Mali or Patni is simply nowhere. He has (if he goes to the ceremony) to sit along with his other caste-men outside the house on the mat provided for their caste, while the higher castes sit inside the house.

Add the following facts :—

(1) Members of castes like Mali, Patni, Muchi, etc., are not allowed to enter into the temples set up by the higher castes;

(2) The upper castes will not take water or food touched by them; and one begins to realize the dreadful sense of mingled inferiority and hatred which an educated member of one of these exterior castes must feel in most cases towards the higher castes.

The exterior castes themselves are, however, guilty of similar treatment to each other and an exterior caste which considers itself to be on a higher social level than another exterior caste adopts exactly the same attitude as the higher castes do towards the exterior castes. A case which recently happened in Sunamganj illustrates this point. The local ferryman there (a Patni by caste) was prosecuted for refusing to row a Muchi across the river. His defence was that, according to social custom, a Patni could not row for a Muchi and that it has always been the practice, if a Muchi wanted to cross the river, for the paddle to be given to him so that he could row himself across.

After careful consideration and analysis of the evidence I have collected, I have come to the conclusion that the following are the main castes in the Surma Valley which should be classed as exterior. They are arranged in alphabetical order :—

1. Dhupi or Dhobi.
2. Dugla or Dholi.
3. Jhalo and Malo.
4. Yogi (Jugi) (Nath).
5. Kaibartta (Jalliya).
6. Mahara.
7. Mali (Bhuinmali).
8. Namasudra.
9. Patni.
10. Sutradhar.

There is general consensus of evidence that these castes are exterior throughout the Surma Valley though the position of some of them seems to be much more hopeful in Cachar than it is in Sylhet. I have no doubt that this is due largely to the absence of a Zemindari class in Cachar which is a temporarily-settled district..... I have been told by several officers that the Maharas are a *jal-chal* caste and that people of this caste were made 'clean' by some ancient Raja of Sylhet—the idea being that the Maharas used to carry the Raja's palanquin and, as Raja wanted to smoke in it, he had to have as palanquin-bearers people who could attend to his smoking requirements. On the other hand some officers completely deny this story and say that the Maharas are not a *jal-chal* caste....the Maharas are principally to be found in South Sylhet. The Sub-divisional Officer (a Muslim) reported as follows :—

"I have made close and careful enquiries and there is a general consensus of opinion that the Maharas are not *jal-chal* and are a depressed class. The story that Raja Subid Narayan made them *jal-chal* for smoking requirements only, seems to be true. If the Maharas are at all *jal-chal*, they are *jalchal* only in the sense that a man of higher caste can smoke a *huka* filled with water by a Mahara. There is not a single graduate among the Maharas in this subdivision and not even a single matriculate can be found. The Deputy Inspector of Schools reports that the only educated Maharas he has met in the whole subdivision are three persons working as Vernacular teachers in Primary and Middle English Schools. So the Maharas are depressed both socially and educationally.....

One gentleman from Karimganj—himself a Nath—has, indeed, no hesitation in including his community among the exterior castes. He writes as follows :—

"So far as my knowledge goes, amongst the Hindus inhabiting this sub-division the Patnis, Jogis (Naths), Namasudras, Malis, Dhubis and Duglas are to be properly included in the list of depressed classes. The reasons of depression regarding each of these communities are almost the same, namely :—

(1) The members of these communities are not allowed by the so called high caste Hindus, to enter the temple ; even their shadow defiles the image in the temple.

(2) The high class Hindus never take any food and water touched or shadowed by these people.

(3) Brahmins of caste Hindus never agree to officiate as priests in ceremonies performed by these people even if they request them.

(4) Some of these communities are not allowed to have the same barber who works amongst the high class Hindus to work for them.

In conclusion I beg to say that these are but few amongst the many disadvantages from which these people suffer."

Previous census reports show that for the last forty years the Naths have been endeavouring to raise their social position by giving up widow re-marriage and refusing food prepared by other castes. In spite, however, of these efforts the Nath community of the Surma Valley is still very much looked down upon and I must, I consider, class them as an "exterior caste".

This classification may seem peculiar inasmuch as I have not classed the Naths (Katonis) of the Assam Valley as exterior. How far the Assam Naths are connected with the Sylhet Naths is a matter into which I intend to enquire further but I doubt whether there is any very close connection. In any case a sufficient explanation of this difference in treatment would appear to be that Hinduism in Sylhet is not so tolerant as it is in the Assam Valley. Even in the Murarichand College caste restrictions seem to be much more closely observed than in the Cotton College. I have received a note on the system of messing in that college and it appears that even the Sahas are not allowed to take their meals in the general dining hall reserved for the upper caste students. In fact the *jal-chal* line is strictly observed there—at least nominally—and the students who do not belong to the upper castes have their meals served to them "either in their own rooms or in those set apart in the main block or in two out-houses provided for the purpose".

Of the Chuhras the Census Superintendent of Baluchistan writes :—

Baluchistan.—"The Chuhras censused in Baluchistan have returned themselves as belonging to the religious groups named below :—

Column 4 of Schedule, *i.e.*, Religion.	Column 8 of Schedule, *i.e.*, Caste or Tribe.
Hindu Balmiki	Chuhra.
Hindu Lal Begi	Chuhra.
Musalman Lal Begi	Chuhra.
Musalman Balashai	Chuhra.
Sikh Mazhabi	Chuhra.
Chuhra	Chuhra.

Although these persons without exception are not allowed to drink from wells belonging to real Hindus, Muslims or Sikhs and are not permitted to enter their places of worship, I include them in the figures for the various religions to which they claim to belong giving separately the numbers (Males and Females) of these untouchables in a footnote in each case."

Madras.—The following extracts are taken from the Census Report for Madras where the Census Superintendent gives as the total number of depressed classes 7,300,000 in round figures, or 15½ per cent. of the population of that province. He goes on :—

"For reasons already given this figure cannot be taken as an absolute tale of those to whom the peculiar disabilities summed up in the broad term 'depressed' attach. There are many Christian converts on whom disabilities press no whit lighter than in the untouchable communities they owned before. These are not included, for personal and local and sectarian variations enter too largely for census allocation to be possible. There are other bodies the difficulties of whose life are hardly less than those of any Adi-Dravida but to whom the technical stigma of untouchability does not apply. Such do not figure in the census list. The census total therefore can fairly be termed only an approximation. It is however a good approximation and, as an indication of the general dimensions of untouchability and through it of the depressed classes problem, is absolutely reliable. Whether its approximation is above or below would depend on the point from which approached. If this viewed primarily the existence of heavy social disabilities, the figure 7,300,000 is a minimum, if it considers strict personal polluting power it is a maximum. The general dimensions of seven millions are beyond contest.

The 7,300,000 figures and the discussions above refer of course only to persons enumerated within the province on census night..... A third of the emigrants belong to the depressed classes and consequently, were the natural population to be considered, eight millions would have to be taken as the round figure for them instead of seven. . . . . .

Only one of the communities represented shows an increase at all over the decade and for the Chakkiliyans the caste record seems full and as accurate as any census figures of caste can be expected to be. Apparently the Chakkiliyan is still content with the old name of his community and is practically free from that seeking after new names which has afflicted the depressed as a whole. His fellow leather worker of the north has not escaped the contagion for Madigas have diminished apparently 16 per cent. More pronounced decline however is apparent in their hereditary enemies, the Malas, who have shed a million, while in the south the Paraiyans have dropped 1¼ millions and the Totis have practically disappeared.....the figures returned for the Adi family.....sufficiently account for the above phenomena. The Andhra section (the name seems to have taken on most in East Godavari), now two-thirds million strong, had no returns in 1921 while that year could yield only 50,000 Adi-Dravidas as against 1931 's 1,619,000, thirty-two times greater. The drift from the old names is nearly as marked on the West Coast. Holeyas were 92,000 in 1921, 50,000 ten years later. They were 155,000 in 1891 and have declined steadily. The few hundred Adi-Karnatakas do not come near bridging the gap and are in any case a Bellary and Coimbatore, not a Kanara production.

It may be that the emergence of 23,000 Pulayans, a community not recorded from Malabar in 1921, accounts for some of the missing Holeyas. The words are identical, with merely the characteristic substitution of a Kanarese 'h' for a Tamil or other 'p' and it is difficult to see how Pulayans could have vanished in 1921 when they are a well-known feature of the region. On the other hand 98 per cent. of the Holeyas of 1921 returned languages other than Malayalam, which goes against the Pulayan theory. The presence of 16,000 Adi-Dravidas in South Kanara clearly accounts for part of the 40,000 and it is interesting that his term should be preferred to Adi-Karnataka. The preference is understandable when it is remembered that the Holeyas are essentially a Tulu, not a Kanarese, community and that while Adi-Dravida does mean something it is extremely doubtful whether Adi-Karnataka or for that matter, Adi-Andhra, has any even theoretical justification at all.

Even the Oriya depressed are not immune from the general decline, for Bavuris and Haddis show a marked decline in numbers. Ghasis, Chachatis, Kodalos, Medaris and Barikis now appear in the records however in numbers considerably greater than the diminution in Bavuris and Haddis and their emergence is the explanation of the others' decline. Other depressed classes of the Oriya region all show an increase, Dandasi, Relli, Paidi, Pano, Dombo, etc., and the quest for euphemisms has not seriously begun in this area, an indication, as already remarked, of the much less acuteness which attends the whole depressed class question there. Conditions in fact reflect those of north India rather than south. The Dandasi community has of recent years made considerable efforts at reform of its own customs and practices, with success; it has not thought it necessary to discard its rather attractive and sonorous caste title but has wisely devoted its attention to contents rather than label.

There is something infinitely pathetic in the vain idea that a change of name can reverse the stigma of centuries; yet this community would apparently retort to Juliet that all lies in a name. It is a mistake to encourage terms which obscure real social units. That so ugly and clumsy a term as Adi-Andhra should come to obliterate real and lively distinctions as Mala and Madiga is hardly to the good. Communities of such numerical importance and pronounced individuality should be encouraged to retain and develop a pride in their cognomens.....

It cannot be said that the social disabilities under which these communities labour are in sight of extinction despite the growth of tolerance and the inevitable effect of the development of communications and of urban life. Distinguished individual effort..... is by no means rare but it remains individual. Communities cannot yet be said even to have altered appreciably in outlook. I came across in a Telugu delta district a subordinate officer of the Labour Department occupying the dak bungalow, an unusual thing for such officers, who ordinarily put up with some casteman in the village. His castemen however shied off him, because of his employment, which brought him into constant association with the depressed classes. This man was of no notably exalted caste but a Telaga. It is probable that resentment at special consideration shown to the depressed classes in land assignment and other directions is reflected also in such an attitude, the resentment that the rising of the under-dog never fails to arouse in those who have kept him down, a feature not peculiar to India. It remains however an indication of the true position in the rural areas where the depressed classes are most represented . . . . . .

A peculiar refinement of the untouchability theory was distance pollution. This set out certain castes as polluting not merely on contact but by mere approach. The Nayadis were the backmarkers in this handicapping system and were practically denied ordinary use of public ways. When the system was in full force Nayadi progress must have borne a strong resemblance to that of a malefactor for whom a warrant is out and whose one object is to avoid close contact with his fellow men. A lifetime so spent can hardly produce elevation of thought or desire and a community whose chief aspiration is to avoid notice cannot contribute much to national life. This

remarkable development of the superiority theory was practically confined to the West Coast and of late years has greatly weakened even there, probably more because of development of communications and increase of population than from any conscious realisation that there is in such a system something hardly compatible with claims to culture and advancement. It is probably becoming evident that a person of such rare texture that a presence sixty feet away pollutes him had better seek out some desert island or develop a less fragile purity. The train began the breakdown of this preposterous system ; the bus may complete it.

Contact pollution on the other hand existed and exists all over the presidency.

An instance of the modification and at the same time of the persistence of discrimination is afforded by the river and canal ferries of the Telugu delta districts. According to petitions quoted in a Government Order of 1919 a member of the depressed classes might have to wait for hours before being taken over as he and a Brahman would never be taken together and the Brahman always had priority. In the bigger boats plying on the two rivers and larger canals there is now no such preference, any person waiting is admitted on board. Depressed classes however have to keep to a different end of the boat from Brahmans. In the cross-river ferries the disappearance is not so complete and an influential Brahman would be taken over in preference to a crowd of depressed classes of prior arrival. In other cases either the Brahman or the depressed class person would hold back to avoid travelling with the other. The extent to which prejudice and preference have scope varies from village to village and with the importance of the Brahman or enlightenment of the depressed. It has been noticed that Christians of depressed class origin make no bones about getting into the boat whether a Brahman is waiting or not. The ferryman occasionally too has prejudices.

On the small canal ferries Brahman precedence is still the general rule, but where the traffic is considerable and the balakats big, as at Nidadavole before the bridge was built, conditions resembled those on the river boats.

The same petition complained that in certain municipalities depressed classes were denied the use of water taps reserved for higher castes, despite circumstances of proximity and convenience. Such restriction if it ever existed as an official practice no longer does.

Despite their lowly status, these communities play a large and important part in the life of the presidency. It is they who furnish the backbone of agricultural labour in the chief ricegrowing districts. In one form or another they have been the victims of an agrestic serfdom wherever they have been. This generally took (and still takes) the form of compulsory advances from their employers which could never be repaid in full and thus tied the borrower to the soil. This was most noticeable in Tanjore but a parallel system of advances produced the same effect in South Kanara. It must be laid to the credit of Ceylon and other estates that they have done more to raise the self-respect of the South Indian depressed classes worker than any other single circumstance. It is possibly for the same reason that emigration is opposed in certain quarters. The Madras Government appointed an officer as Commissioner of Labour and among his particular functions are the attending to the needs of depressed classes. The decade has seen much expenditure on provision of wells for them, of schools, and a most important feature, the buying of house sites for them mainly in the delta areas. A notable example of a breakaway from caste traditions is in the Nambudri who was schoolmaster in a depressed classes school in Malabar. The Nayadi colony of Olavakkot formed to house members of possibly the most contemned community in Malabar has been able to develop its activities more than it anticipated. Recently however some difficulties have arisen through a boycott by other castes of a school which received some Nayadi pupils."

APPENDIX II.

Primitive Tribes.

The purpose of this appendix is not to give an account of Primitive Tribes but to estimate their numbers and distribution, to indicate briefly certain important considerations which bear on their welfare and administration, and to point out where more detailed information is available.

Since 1891 no serious attempt seems to have been made to arrive at the figure of Hill and Forest tribes. The figure given in Table XVII in 1891 was 15,806,914 but it was clearly incomplete, excluding as it did the Musahars (622,034 at that census) and others such as the Dublas and Talavias of Bombay and Baroda (172,052 in 1891). The Census Commissioner in 1921 roughly estimated the strength of hill and forest tribes at 16 million (page 226, Section 194 Census Report, 1921), but his estimate was based apparently on the figures of major tribes of which a number are recorded in Section 87 of his Chapter IV (page 112). He does not mention tribes so important numerically as Bhumij (240,229 in 1921), Kol (328,425 in 1921), Bharia (630,862 in 1921), or Karen (1,220,356 in 1921), and as the percentage of the population laid down as qualifying a caste or tribe to be separately tabulated must have ruled out of tabulation entirely a very large number of small units, he probably failed to realise the very large figure which is composed of broken and scattered tribes small and insignificant individually. At this census special injunctions were given that all primitive tribes were to be tabulated whatever their numbers and irrespective of the percentage proviso for the individual tabulation of castes. It is therefore now possible to give accurate numbers of any identifiable tribal unit, though it is less easy to indicate the extent to which such a unit remains primitive in its habits.

The basic figure indicating the total number of primitive tribes is to be obtained from Table XVII by adding together the total figures of groups I, II and III. This figure amounts to 26,735,339, but some adjustments are necessary. These adjustments cannot be carried out with precision, as so many tribes, particularly in the Bhil, Koli, and Gond groups, fade off into castes wherever they live in the plains or open country as ordinary Hindu villagers, but if certain complete groups be deducted and others allowed to remain, since it is impossible to deal with broken units, and if no attempt made to include a certain number of nomadic tribes whose condition is doubtful and, if properly described as primitive, it is perhaps the result of degeneration rather than failure to rise, tribes such as Banjara, for instance, or Kaikadi, Yerukalas Pardhis or Sansis (*vide* Table XVII group XI, 14), or the Koracha, Korama and Kuruba of Mysore where 12,333 persons have been returned as of tribal religion (apart from their 250,000 fellow tribesmen returned as Hindu), none of whom have been included in the figures here given of primitive tribes, then a reasonably accurate figure can be reached as representing the total population which can properly be described by the term 'primitive tribes'; there will still be inevitably a slight overlap with the figures of the exterior castes given in Appendix I, *e.g.* in the case of Turi in Bihar and Orissa.

Although this test has by no means been rigidly adhered to, the tribes given in Table XVII relate primarily to primitive tribes enumerated in more than one province; many other primitive tribes will be found in Table XVIII, but while some appear in both, others are likely to be found in neither table and reference for their details has to be made to provincial or state volumes. It is consequently necessary here to add to the basic figure the following :—

Primitive Tribes of Travancore State not included in Table XVII.

Tribe.	Population.
Kanikkaran	6,659
Malankuravan	66
Malapantaram	187
Malapulayan	254
Malayarayan	3,182
Mannan	1,276
Muthuvan	1,301
Thantapulayan	795
Ullatan	5,121
Vettuvan*	1,322
Vishavan	166
Total ..	20,329

*Included in Table XVII as a caste under group VI, 2.

1. *To group III.*—
   Travancore Tribes .. 20,329
   (*Plains Uralis have been omitted, Mala-Uralis only (916) having been reckoned here as 'Primitive'; they appear in Table XVII, as also Paliyans (483).*)
   Kaniyan in Madras 1,470
2. *To group 3.*—Andh in Hyderabad State 6,100
   Andh in Central Provinces and Berar 58,549
3. *To group 6.*—Bagata in Madras.. 34,379
4. *To group 7.*—Tipara in Bengal .. 203,069
   Tipara in Assam .. .. 4,000†
5. *To group 8.*—Khyang in Bengal 1,002
6. *To group 11.*—The following tribes in Assam :—

Abor	14,042
Aka	38
Dafla	1,600
Deori Chutiya	4,000†
Lalung	43,448
Mikir	129,797
Miri	85,038
Mishmi	2,234

†Vide *Assam Census Report*, 1931, page 222. Precise figures have not been tabulated.

7. *To group 11.*—The following tribes in Bengal—

Bhotia	14,783
Chakma	135,508
Dhimal	376
Khambu	32,601
Murmi	35,224
Lepcha	12,720
Toto	334
Yakka	873
and in Sikkim—	
Bhotia	15,192
Khambu	18,565
Murmi	7,017
Yakka	142
To group 11.—In Assam—Alien Tribes on tea-gardens	53,121*
In Burma—Lolo-Muhso	93,214

These additions add up to 1,028,765 making with the first mentioned figure a total of 27,764,104.

From this total certain deductions clearly have to be made—

1. *From group 2* Minas and Meos (1,110,479) and Mers and Merats (139,528) should be excluded. They cannot now be regarded in general as primitive, though the Mina may in some cases retain some primitive characteristics.

2. *From groups 2 and 3* the difference between the number returned by Baroda as Primitive and Forest Tribes and the numbers for that State included in these groups. This difference is 230,897, the figure by which the latter exceeds the former.

3. *From group 3,* 182,235 Kolis enumerated in the Punjab, and 6,934 Kolis in Delhi, a caste in these cases rather than a tribe.

4. *From group 8* Meitheis both in Assam (324,432) and Burma (6,113) must be deducted. They cannot be treated as primitive.

5. *From group 10* Ahoms (249,434) and Shans (900,204) must be deducted for the same reason.

This makes a total for deduction of 3,150,256 giving a remainder of 24,613,848 as the total population of primitive tribes in India 1931. It is unlikely that this total is understated and its tendency is obviously to decrease rather than increase with the lapse of time.

Religion.

Of this total number of 24,613,848 only 8,280,347 have been returned as adhering to their tribal religions. The remainders are mainly Hindu, but in certain tribes there are large numbers of Christians, some Buddhists, and a few, like the Tadvis of Khandesh, are Muslims. Table XVIII will show for many tribes not only the respective proportions in 1931 but the change from census to census wherever figures are available.

Distribution.

The main figures of distribution can again be obtained from Table XVII where figures for provinces and states are shown in brackets against each group of tribes. Those indicated above are to be added and subtracted respectively and the resulting figures are stated by provinces below :—

Ajmer-Merwara	18,904
Andamans and Nicobars	10,405
Assam	1,678,419
Bengal	1,927,299
Bihar and Orissa	6,681,228
Bombay	2,841,080
Burma	2,206,356
Central Provinces	4,065,277
Coorg	1,089
Madras	1,262,369
United Provinces	400,184
Provinces	*21,092,610*
States	*3,521,238*
Baroda	313,273
Central India	1,342,081
Cochin	1,048
Gwalior	281,033
Hyderabad	222,806
Rajputana	802,178
Sikkim	41,257
Travancore	21,728
Western India States	495,834
Total	24,613,848

* *N. B.*—These figures refer chiefly to tribes from Chota Nagpur and the Madras Agency tracts but exclude any who have returned their religion as Hindu. The latter, that is of course the vast majority, appear in Appendix I as exterior castes.

As a check on these figures we may compare them with those arrived at by Provincial Census Superintendents. Thus the figure here for Bihar and Orissa is 6,681,228 and the figure for primitive tribes arrived at by Mr. Lacey for that province is 5,643,431 in addition to which he records 1,437,667 as the figure of tribes or castes on the border line. Of the total 7,000,000, roughly 2,000,000 have been treated as exterior castes indicating that the overlap in the figure of primitive tribes and of exterior castes in the appendices is not very great at any rate in Bihar and Orissa, which contributes nearly a quarter of the whole. Again the figures for primitive tribes available from the Central Provinces is 4,111,972 (vide *Census Report for Central Provinces and Berar*, 1931, page 359) a figure which embodies Halba (120,754), and Ojha (5,106) not included in these figures. From Madras again the number obtained from the tables is 1,428,938, but this includes 166,569 who are described both as depressed castes and as primitive tribes. They have been omitted here and are covered by the figures in Appendix I.

Groups returned from Madras both as primitive tribes and as depressed castes and excluded from the figures given here for Primitive Tribes.

Dombo	79,643
Karimpalan	2,807
Katturayakan	1,581
Kudubi	12,011
Pano	70,527
Total ..	166,569

Administrative Problem.

The total figure of primitive tribes in India may then be taken as 25,000,000 in round numbers, of which about 20,000,000 are in British India of whom again 2,500,000 are found in Burma, for there are in Burma a number of hill tribes who were only partially enumerated at the census. It has already been indicated that their position in surroundings of a more developed culture presents certain problems of administration. As long as a primitive tribe remains in isolation conducting its own affairs according to its own laws and customs it presents no problem except that required to prevent raiding or other forms of aggression on more civilised or less warlike neighbours. For this purpose a military occupation of territory may be necessary and a loose system of political control or administration of some sort which need not involve more than a minimum of interference with tribal customs and the expense of which, if greater, as it normally will be, than any revenue yielded by such an area, is in the nature of insurance. Where communications are meagre or non-existent contact with the outer world will be so slow that the effect of its impact will not be rapid enough for observation and no change will take place in the primitive community except the gradual adaptation and alteration resulting from the intercourse on the fringes of the area inhabited. Changes of this kind involving a very slow change of environment and outlook are familiar enough in India and have been going on for centuries if not millennia. No serious problem arises until this process of slow adaptation is interfered with by a development of communication and a sudden increase of contacts.

Even excise laws, although in many ways to the benefit of primitive tribes, may operate as a hardship, and would be found excessively severe if the very proper restrictions on distilling were extended to *pachwai* and *tari* made for household consumption and forming a very important part of the diet of tribes that cannot grow sugar and are too poor to buy it. For three months in the hot weather the Marias of Chanda live almost exclusively on a very mildly alcoholic beverage, much as the Angami Naga does to a less degree in Assam. Any one well acquainted with either tribe will vividly realise the hardship that might be wrought by bigoted prohibitionists anxious to disallow to others that freedom which they do not value for themselves, and total prohibition is a policy shared by Hindus and Muslims. The prohibition of distilling itself may be a hardship, as for the Gond who must offer to his god liquor distilled by the family of worshippers, but this is probably one of those that must be borne in the interests of the community, like the game laws that prevent a Kachha Naga or a Kuki from offering game at the graves of the dead during the close season, or the troublesome restrictions on homicide which prevent a Wa from fertilizing his crop with the life-essence of a stranger, or the Kondh from doing the same with the *meriah* he has reared for that purpose.

The rapid opening up of communications, involving contact at many points and often the practical settlement of tribal country, entirely alters the aspect of any gradual changes that may have been taking place. Generally speaking it substitutes conflict for contact. Not necessarily, that is, a conflict of arms but of culture and of material interest. Attempts to develop minerals, forests or land for intensive cultivation can only be made at the expense of the tribe whose isolation is thus invaded. The customs which regulate the ownership, usufruct or transfer of land among primitive tribes are generally at variance with those observed by more sophisticated communities, and in the conflict between the two the tribal custom is normally superseded by a code which is neither valued nor understood by the tribe and in the application of which the tribe is deprived of its property, generally in the name of law, either by alienation to foreigners or by transforming the trusteeship of a tribal chief into absolute ownership of a kind quite foreign to the customs of the tribe. This has befallen both the Mundas, for instance and the hill tribes of Chittagong, to mention two instances only, while even in Rajputana a somewhat similar process has been at work. Here an authority thoroughly conversant with

the people and conditions in that Agency states that during the last 25 years there has been a very marked change in the position of landlords from the chiefs downwards :—

"What.....has happened in Rajputana in the last century is a complete departure from the ancient relationship of peasant and chief, wherein the chief has become securely established in 'rights' that were not his a hundred years ago, and the peasant has been deprived both of rights and responsibilities. It would not have been difficult to establish universal franchise a century ago ; as a matter of fact it was exercised (and is still exercised in inaccessible places) without being labelled. To day it would be so difficult as almost to seem an impossible task to make the peasant withdraw his watchful gaze from his landlord's activities, just within the borders of the law, long enough to exercise an intelligent vote, let alone a responsible one..... In the century the operation of British law and its influence has set up the ruling chiefs in a security, authority and prestige that never appertained to their position in earlier times, and.....the peasant has been deprived of just so much as has accrued to the other.....Progressively, and at an accelerated pace since Lord Minto's commencement of the policy of non-interference, the common people have been deprived both of authority and responsibility. The British idea of law and application of it has made this process easy and apparently natural."

A similar application of alien law also usually disturbs the tribal customs of debt. Tribal customs of debt are frequently, perhaps normally, stated in terms of extravagant usury. Such terms however represent less the real customs observed in practice than the ideal which the lender considers ought to be the return, and in point of fact they are qualified by very important considerations. In the first place there is commonly no law of limitation, and the borrower may not expect to repay before the next generation while the lender is very often so placed that there is a moral compulsion to lend under certain circumstances even if no return is expected in his lifetime. Thus it is often the custom for a chief to lend paddy to the most indigent and unprofitable of his villagers in times of scarcity though he knows repayment to be extremely unlikely. In any case when repayment does take place there is normally a settlement by accommodation between both parties which bears little relation to the payment due on a strict interpretation of the law of usury as formally stated by the tribe. It is only natural that tribesmen whose views of debt are dictated by this sort of vague custom are perfectly ready to subscribe without demur to the most flagrantly usurious agreements exacted by foreign moneylenders who intend to invoke a foreign code to compel repayment on the letter of the agreement and at the time when it suits them to do so instead of at such time as the debtor finds himself in a position to pay. Similarly the criminal law of a civilized community is often entirely at variance with what is felt to be just and proper by tribal custom. Afforestation again is a frequent grievance, and in forests which were common property under a tribal regime it becomes a punishable offence to exercise what the tribe regards as an inalienable right. Thus under the Assam Forest Regulations tribal land used for *jhuming* is held to be Unclassed State Forest, and as such at the absolute disposal of Government. It can be taken and its possessors ousted without any sort of compensation. But this land has by the great majority of hill tribes been regarded for many generations as their most valuable real property. Further under a recent regulation it has been held that a man quarrying stone, for his own use, on his own jhum land is liable to pay Rs. 10 per month or Rs. 100 a year as a permit fee on the ground that the land from which he takes the stone is Unclassed State Forest, although it may have been the subject of bequest, mortgage, or transfer by sale and purchase for twenty generations, and its boundaries a matter of common knowledge in the village. Indeed a recent case occurred in which a young and inexperienced officer announced, on the strength of this Unclassed State Forest doctrine that he would recognize no individual rights in jhum land, and even fined a man for letting land bought by his own grandfather to another man on lease. Such an action would in some tribes have been almost enough to cause a rebellion by itself ; but it was in no way inconsistent with the theory that the tribal land is unclassed State forest. In the Madras Agency Tracts again the same attitude has been taken towards *jhum*, there called *podu*, and has been carried to the extent of the prohibition of cultivation, twice bringing the Sawara tribe to the verge of open rebellion. *Dahia* (or *bewar*), as it is there called, is similarly forbidden in the Central Provinces, compelling the forest tribes to cultivate only under the land settlement system which is in many cases unsuited to them. Primitive systems of agriculture are frequently extremely wasteful of forest land and may in hill country prove damaging to adjoining plains on account of denudation, the too rapid escape of rain and consequent inundation below. At the same time wasteful cultivation of this kind is very often the only known means of subsistence. It cannot be abandoned in a day for other methods with which the cultivator, whose knowledge is traditional, is unfamiliar. Again the exploitation of minerals not only involves the taking up of tribal land but generally the introduction of an alien population, usually of an extremely mixed character and not infrequently exceptionally dissolute. This impinges on tribal life in a number of disconcerting ways. Even the invasion of missionaries is liable to produce as much evil as good, if not more, for their conduct and objects are generally in extreme conflict with tribal religion and with tabus of all kinds, and their point of view, readily comprehensible to an alien administration which understands the tribal position very vaguely if at all, and backed as it so often is by influentially vocal societies at a distance, is much more likely to obtain the support of authority than tabus which are on the face of them unreasonable to all except those to whom they are the most vitally important things in life. A similar misunderstanding of the tribal point of view is apt to arise in the case of many customs, and it may be enough to mention that of marriage by a form of capture common to both Bhils

and Gonds, and, although quite familiar to the tribesmen themselves, often capable of being treated by British courts as cases of abduction. It is true that the law would normally require a complaint to move it to action, but it is obvious that a knowledge of the possibility of moving it is likely to encourage complaints from persons who would otherwise have acquiesced contentedly in tribal custom, and to result in a quite unjust punishment of the party complained against for following a law really known to and admitted by the complainant. A Bhil was convicted and sentenced by a British court just about the time of the 1931 census for just such a breach of the penal code in entire accordance with Bhil custom. Apart from laws in themselves their manner of application may be extremely severe on people whose methods of dealing with antisocial actions or persons is entirely different. No apology is required for quoting at length from Rai Bahadur Sarat Chandra Roy, himself a practising lawyer in Bihar and Orissa courts :

"The British system of administration of justice.....has unintentionally produced certain deplorable effects on the moral character of the aborigines. This complicated system of law and legal procedure, which is.....suited to advanced districts and people, was naturally not comprehended by the simple aborigines and was not suited to their level of culture. Although the judges and magistrates were inspired with a desire to do justice, very few of them were, or still are, conversant with the languages, customs and mentality of the people. And thus this complicated system of administration of justice has tendered to impair the natural truthfulness and honesty of the people in many cases. By repeated painful experience the people have found that under the complicated and cumbrous Procedure Codes and a too technical Law of Evidence which are now in force and which are beyond their comprehension, their native straight-forwardness and veracity is no match for the chicanery and falsehood and the many subtle tricks employed against them by many of their adversaries. And "law-touts" and other petty-fogging "advisers" are not wanting to induce them to adopt the ways of their adversaries. Such advice unhappily they now not unoften follow, though rather clumsily. But, as is inevitable, the expensive system of litigation through one court after another—Courts of Original Jurisdiction, Courts of First Appeal and Courts of Second Appeal,—is ruinous for the poor aboriginal, who, in most cases, cannot fight up to the last, and even those who can, only find themselves in the end utterly ruined through the expenses and trouble of securing ultimate victory. In this way the complicated British-Indian system of administration of justice has more often than not helped in ruining the aboriginals economically and in degrading them morally.

The British system of law and administration has further tended to impair the social solidarity of the tribes and has weakened the authority of the social heads or Panches and the respect they formerly commanded. Until recently, when Government orders validating tribal customary law regarding succession and inheritance were promulgated, the Courts often disregarded the custom against inheritance by daughters and applied to them a Succession Act quite inconsistent with the fundamental social structures and ideas of kinship of the tribes. Until recently when rules against alienation of ancestral lands were promulgated by Government, the ancient tribal custom against such alienation was utterly disregarded, and through such alienation, alien Hindus and Mahomedans were admitted to the villages resulting in the further disintegration of the old village community. The recent restrictions against alienation have come so late, and the people have been now so long accustomed to such transfers, that a large section of the people now feel these restrictions irksome and no longer needed, and subterfuges are often resorted to in order to evade them." *Effects on the Aborigines of Chota Nagpur of their Contact with Western Civilisation—Journ. Bihar and Orissa Research Soc. 1931.*

It is easy to see how a combination of anti-tribal forces is likely to create a condition of excessive discomfort in tribal life, the most serious aspect of which is the complete breakdown of the communal organization. A tribe living in comparative isolation will usually be found to have developed an adaptation to its environment which within certain limits approaches perfection, an adaptation which may have taken many millennia to accomplish, and the breakdown of which may be the ruin of the tribe, for it is likely to proceed at a far greater rate than either the gradual change in physical environment or than the still slower process of adaptation to that change.

In the past the administration of tribal areas as non-regulation districts has in very many cases done much to make the position easier for the tribes affected. However uncomprehending and uncomprehended the administration may have been it was in a position to temper the conflict of interest, and to that position have been due precautions such as the Chota Nagpur Tenancy Act, or such as exemption from the provisions of the Indian Succession Act or of the Stamp Act, or restrictions on the appearance of pleaders in courts hearing tribal cases. Even where such exemptions have been made they have often been too half-hearted and too easily nullified. Of some 30 primitive tribes in the Central Provinces only 9 are specifically exempted from the operation of the Indian Succession Act, while in Assam a hillman who subscribes as he must do when in Government service, to the General Provident Fund cannot nominate as his heir his brother or his brother's son according to his own venerated custom but if he has no issue must nominate his wife. This is reasonable no doubt to a Britisher, but is completely at variance with sentiment and custom in the Assam hills, and generally with good and sufficient reason. Similarly the Post Office Savings Bank recognizes Hindu and Muslim law but not tribal custom. It seems more than likely that the incorporation of tribal areas into regulation areas, when such areas are governed by more or less democratic forms of government on the constitution of which the tribes will be placed in an insignificant minority, will bring their interests into direct conflict with the interests of their neighbours under conditions in which the administration of the tribal area will have very little power to modify the severity with which it will react on the tribes. Tribes occupying such an area realize little or nothing of the method in which laws are administered outside it ; if they do they have no means of making themselves heard.

The consequence is that a few alien settlers who are able to do so and are wishful to live under the ordinary codes, which give tremendous advantages to traders and others dealing with simple and unlettered men, are likely to succeed (it has under existing conditions often been done) in getting a method of administration extended to a tribal area the disadvantages of which to the tribesmen are completely unappreciated by them until they find themselves irrevocably within its grip. In the process of accommodation it is only too likely that a previously nonhinduised hill tribe may become a mere depressed caste as has happened to the Turis, Koras and Kharias, to mention only three instances from the same part of India,* while the cultivator is deprived of his rights in tribal land and degraded to that of a landless labourer, a process pointed out in the case of Gonds and kindred tribes by the Census Superintendent for the Central Provinces in Appendix III of his report.

In the alternative they may retain a sort of emasculated tribal life, deprived of the customs and festivals that gave it meaning and cohesion, and fall into that psychical apathy and physical decline which has decimated so many tribal communities in the Pacific and elsewhere; and this decline is accelerated in another way by the opening up of communications. Many new diseases are imported against which no immunity has been evolved, since they did not form part of the environment to which the tribe is adapted, and the result is a staggering mortality from which there may be no recovery. The rapidly approaching extinction of the tribes of Great Andaman has largely been due to diseases imported into the penal settlement and communicated to the Andamanese by convicts. The use of distilled liquor, of opium and even of mercury (as a drug) is performing a similar disservice for other tribes and is likewise the result of the improved communications which corrupt good manners. The Durbar of a State known to the writer vetoed the advent of rail communications on the ground that railways were an evil: they only brought in dirt, disease, crime and strangers, and the state was better without,—a judgement in which we may find very much indeed to commend.

Meanwhile the difficulties under which primitive tribes are placed with regard to education have already been pointed out (*vide* paragraph 141 in Chapter IX), and in Bihar and Orissa a memorandum of the Government itself, submitted to the Statutory Commission, states that in the matter of education the aboriginals of that province "as a whole are, relatively to the general population, in a worse position than they were in 1921. They have got a little less than their general share of the big advance made in primary education and decidedly less of the advance in high and middle education". Education in itself is a doubtful blessing in so far as it is apt to unfit them for their environment, but it is probably a necessary weapon of defence for them in the circumstances in which they are placed, perhaps the only one of any permanent value, though the real solution of the problem would appear to be to create self-governing tribal areas with free power of self-determination in regard to surrounding or adjacent provincial units.

It remains to add a list of all papers in the 1931 census series which deal with primitive tribes from one aspect or another. Some of them are collected in part III of this volume but others can only be found by reference to the provincial volumes concerned.

List of passages in Provincial and State Census Reports (1931) bearing on the customs, conditions or welfare of primitive tribes. Items marked with an asterisk appear in Part III of this volume; items marked † are also reproduced but in part only, or in a different form. References.

Census volume and province, etc.	Chapter or passage to which reference is made.	Subject.	Author.
II. Andaman and Nicobar Islands.	A. Andaman Islands, † Chapter V.	*The Aborigines*	M. C. C. Bonington.
	B. Nicobar Islands,† Chapters V-VII.	*Ethnology, etc., of Nicobarese*	Do.
	Appendix A*	*The Shompen*	Do.
	Appendix B*	*Religion of Kar Nikobar* ..	G. Stevenson.
III. Assam	Chapter XII, Appendix I(2)	*Backward Tribes*	C. S. Mullan.
	Appendix A*	*Effect on Primitive Tribes of contacts with civilization.*	J. P. Mills.
	Appendix B*	*Notes on certain Hill Tribes* ..	J. P. Mills and others.
V. Bengal	Appendix II*	*Notes on the Peoples of the Chittagong Hill Tracts.*	J. P. Mills and others.
VII. Bihar and Orissa ..	Appendix V*	*The Kurmis of Chota Nagpur*	W. G. Lacey.
	Appendix VI†	*The Santals*	W. G. Lacey and P. O. Bodding.
VIII. Bombay ..	Appendix B	*Notes on the aboriginals and Hill tribes found in the Presidency.*	*H. T. Sorley.*

*These instances might be increased indefinitely Practically all the primitive tribes south of the Godavari river have become mere depressed castes.

Census volume and province, etc.	Chapter or passage to which reference is made.	Subject.	Author.
XI. Burma	Chapter VI, Section 63† ..	*Lahu and Kaw marriage customs.*	J. H. Talford.
	Appendix C*	*Notes on the Indigenous Races of Burma.*	J. H. Green.
	Appendix E†	*Naga Tribes and their customs.*	T. P. Dewar.
XII. Central Provinces and Berar.	Chapter XII, Section 13 ..	*Primitive Tribes*	W.H. Shoobert and others.
	Appendix III*	*Aboriginal Tribes of the Central Provinces.*	Do.
XIV. Madras	Chapter XII†, pp. 360-392	*Primitive Tribes*	M. W. M. Yeatts and others.
XVIII. United Provinces	Chapter XII, appendix D..	*Monographs on certain Castes and Tribes.*	A. C. Turner.
XIX. Baroda... ..	Chapter XII, Section 407 Appendix IX (Caste glossary).	*Forest and Primitive Tribes* .. s. v. *Primitive and Forest Tribes.*	S. V. Mukherjea.
XX. Central India ..	Appendix I†	*Ethnographic account of the Bhils of Central India.*	C. S. Venkatachar.
	Appendix II*	*Migration of Castes and Tribes into Central India and their distribution.*	Do.
XXI. Cochin	Appendix I†	*The Forest Tribes of Cochin*	K. Govinda Menon.
XXIII. Hyderabad ..	†	*The Chenchus*	G. A. Khan.
XXV. Mysore ..	Appendix X	*Some facts regarding four primitive tribes.*	M. Venkatesa Iyangar.
XXVIII. Travancore ..	Appendix I†	*The Primitive Tribes* ..	N. Kunjan Pillai and L. A. Krishna Iyer.

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